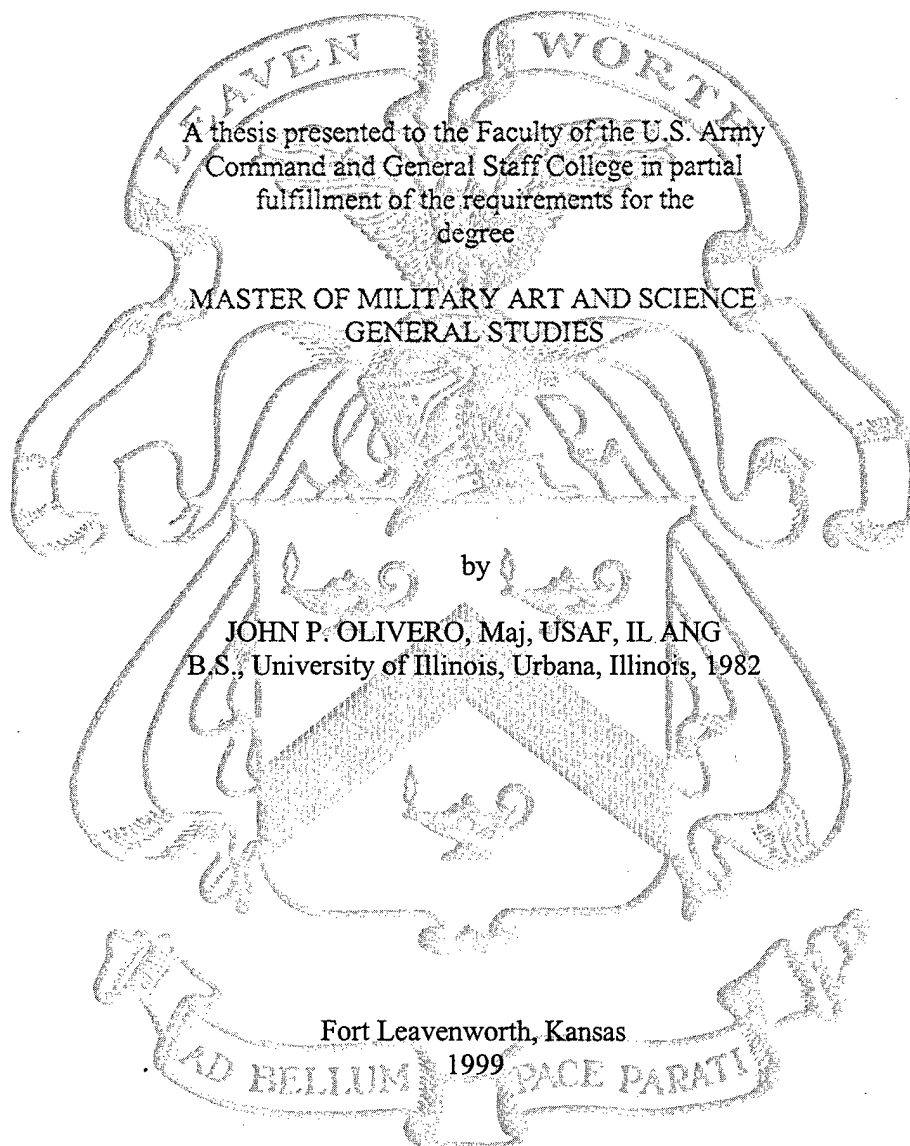


THE PROFESSIONAL AIR LIAISON OFFICER: SHOULD
THE U.S. AIR FORCE DEVELOP AN AIR LIAISON
OFFICER CAREER FIELD?



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OFFICER CAREER FIELD?

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
GENERAL STUDIES

by

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Fort Leavenworth, Kansas
1999

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MASTER OF MILITARY ART AND SCIENCE

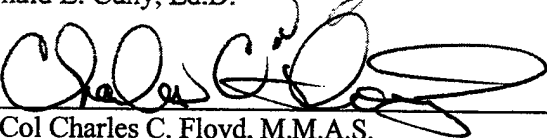
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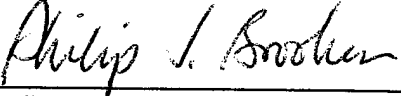
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

The Professional Air Liaison Officer: Should the U.S. Air Force Develop an Air Liaison Officer Career Field? By Major John P. Olivero, USAF, 107 pages.

This study investigates the Air Liaison Officer (ALO) duty, current manning, and training issues. The premise was that the ALO duty could be improved by developing an ALO career field. The current two-year tour does not provide continuity in the tactical air control party (TACP) mission. Most ALOs perform one tour and never perform the duty again. Anecdotal data from previous rated ALOs suggest the duty was very unpopular.

A literature review identified the ALO tasks and manning issues. A survey instrument was developed to sample opinions and to answer questions. It was administered to ALOs and ROMADs (ETACs) to identify the perceptions of assigned personnel regarding their training, duty, and its affect on their career. Army staff officers and commanders were also included in this survey.

The study indicated the ALO duty does not require a rated officer. The duty requires skills and knowledge that can be learned and developed through an initial training period of six to nine months. An ALO career field would benefit the Air Force by providing a constant pool of qualified and devoted ALOs.

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Finally, I would not have completed this research without the support of my wife and family to whom I owe much gratitude. My parents, sister and brother provided a non-military perspective and assistance with proofreading the final product. My sister Lisa and brother Luke were always willing to assist in the correction of their older brother's grammar. This project took much time away from my wife Kyong and was more challenging when our first born daughter Shana arrived. I am forever grateful to her and love her and my daughter dearly.

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LIST OF ACRONYMS

A2C2	Army Airspace Command and Control
AAGS	Army Air-ground System
ABM	Air Battle-manager
ACA	Airspace Coordination Area
ACC	Air Combat Command
AFDD	Air Force Doctrine Document
AFARN	Air Force Air Request Net
AFI	Air Force Instruction
AFSC	Air Force Skill Code
AGOS	Air Ground Operations School
AI	Air Interdiction
ALO	Air Liaison Officer
ANG	Air National Guard
AOC	Air Operations Center
ASOC	Air Support Operations Center
ASOG	Air Support Operations Group
ASOS	Air Support Operations Squadron
ATO	Air Tasking Order
AWAC	Airborne Warning and Control System
BALO	Battalion Air Liaison Officer
BCTP	Battle Command Training Program
BDA	Battle Damage Assessment
BDE	Brigade
BN	Battalion

CAS	Close Air Support
CP	Contact Point
DIV	Division
ETAC	Enlisted Terminal Attack Controller
FAC	Forward Air Controller
FAC-A	Forward Air Controller – Airborne
FIST	Fire Support Team
FLO	Fighter Liaison Officer
FM	Field Manual
FSCoord	Fire Support Coordinator
FSE	Fire Support Element
FSO	Fire Support Officer
HF	High Frequency
JFCC	Joint Firepower Control Course
LANTIRN	Low-altitude Navigation and Targeting Infrared for Night
MDMPP	Military Decision-making Planning Process
MOA	Memorandum of agreement
MOA	Military operating area
MRE	Meals Ready to Eat
MRR	Minimum-risk Route
OJT	On the Job Training
ROMAD	Radio Operator Maintainer and Driver
SEAD	Suppression of Enemy Air Defenses
TAC	Tactical Air Control
TACP	Tactical Air Control Party

TACS	Tactical Air Control System
TAD	Tactical Air Direction
TALO	Tactical Airlift Liaison Officer
TDY	Temporary Duty
TTP	Tactics, Techniques, and Procedures
UHF	Ultra-high frequency
USA	United States Army
USAF	United States Air Force
USMC	United States Marine Corps
USN	United States Navy
VHF	Very High Frequency
WP	White Phosphorous

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CHAPTER 1
INTRODUCTION

The ending scene in this year's popular movie *Saving Private Ryan* shows how close air support (CAS) can have a devastating effect on a battle and turn a potential loss into victory. In America's recent war, Desert Storm, there were many instances where Air Force CAS missions bombed targets as the ground forces advanced into Iraq and Kuwait. There are also numerous documented situations throughout the United State's past wars in which Air Force tactical air support played an important role in the success of U.S. fighting ground forces. The planning and coordination of tactical air support is the responsibility of the U.S. Air Force air liaison officer (ALO) working with the Army maneuver unit. The Army is dependent upon a capable and qualified ALO for the success of their tactical air support and for the protection of their forces.

The current Army and Air Force doctrine (FM 100-5, 1993; AFDD1, 1997) emphasizes joint operations and the need for working together. The US Air Force tactical CAS provides an Army commander an important asset for mission accomplishment. The tactical air control party (TACP), led by an ALO, furnishes the important link between the Army and the Air Force. The ALO is a significant position on the maneuver commander's staff. The enlisted members of the TACP are trained tactical air control specialists. The ALO, on the other hand, is an aeronautical rated officer (pilot, navigator, or weapons systems operator) who may only perform this duty once in a career. The ALO duty is a temporary tour for a rated Air Force officer which lasts only two or three years. It is not a career.

Problem Statement

There are some problems with the current ALO duty. First, the ALO assignment (active duty) is limited to aeronautical rated officers (pilot, navigator, and weapon systems operator).

Currently, the Air Force has a shortage of rated officers (Grier 1998, 60). This shortage is expected for the next five to ten years and has resulted in the Air Force examining other manning sources for the ALO duty. Second, the ALO duty is a temporary assignment. Just like any new duty position, it will take some time to become proficient. Training a new ALO takes anywhere from three to six months to become competent in the performance of that duty. Just when the ALO masters the duty, the ALO leaves the assignment and most likely will never perform ALO duties again. This creates a lack of continuity and a loss of expertise. Third, the ALO assignment is unpopular. Most rated officers would rather be in a flying assignment than in the field with the Army eating meals ready to eat (MREs). Finally, there is inadequate representation of the ALO and TACP issues at the Air Staff or Air Combat Command. Because only a small percentage of rated officers have been ALOs; it is most likely that few will ever serve staff duty at Air Force Headquarters or Air Combat Command. Therefore, this increases the possibility that the staff officers may not be fully aware of ALO and TACP issues.

One possible solution for these ALO problems and issues would be to create an ALO career field. The Air Force would then have a constant source of qualified and devoted officers (rated or nonrated officers) supporting this important mission.

Thesis Question

The thesis research sought to answer the following question. Should the U.S. Air Force develop an ALO career field?

Secondary Questions

To answer the thesis question, there are a number of secondary questions that need to be answered.

ALO Duties

1. What is the job description (tasks) by echelon for the ALO duty?
2. What are the skills and knowledge needed to perform the ALO duty?

ALO Qualifications

1. Who in the Air Force is qualified to perform the ALO duty?
2. Does the ALO need to be a rated officer?
3. Is the Air Force meeting the Army requirements of providing a qualified ALO?

ALO Training

1. Does a newly assigned ALO arrive at his duty station with the necessary training to perform the job or is it on-the-job training?
2. How long does it take an ALO to become proficient in the duty assignment?

Significance of the Study

The United States military will continue to operate in a joint environment. Within this joint environment the Air Force will provide tactical air support to the Army: which is a huge combat multiplier. If used correctly, it means the difference between success and failure. However, there is a risk of fratricide whenever it is used incorrectly. Successful CAS requires that the Air Force provide trained, competent, and committed officers to lead the tactical air control party. The Air Force has a shortage of rated officers for its aircraft. Whenever a rated officer is selected for ALO duty, he is removed from flying status for up to two or three years (ALO training and duty assignment) and this directly affects Air Force mission support.

One possible solution to this problem is to create an ALO career field staffed with nonrated officers. This solution will free rated officers to perform their primary missions while supplying trained ALOs to provide the Army maneuver commander with CAS coordination.

Background

The Air Force has a memorandum of agreement (MOA) with the Army to provide a TACP to all Army maneuver units from the corps down to the battalion (MOA 1996, 20). At the battalion level, a TACP manning consists of one ALO, usually a captain or lieutenant, and three or four enlisted personnel, who are Tactical Air Control Specialists (AFSC 1C4). Previously, the enlisted personnel in the TACP were known as ROMADs, an acronym that stands for Radio Operator, Maintainer, and Driver which is still used today. The TACP increases in manning with more ALOs and enlisted personnel at each Army echelon (AFI 13-106 1997, 23). The ALO is in charge of the TACP. Every TACP has enlisted personnel who are trained as Enlisted Terminal Attack Controllers (ETAC). An ETAC is trained to manage the terminal attack control of the CAS aircraft. This means they direct the aircraft onto a target in which the Army maneuver commander gave his approval to attack. The ETAC will give the pilot clearance (approval) to drop the bombs on the target. The pilot will not drop the bombs unless either the ETAC or ALO gives him clearance. This process prevents fratricide.

At the Corps level, there are two Air Force elements, a TACP and the Air Support Operations Center (ASOC). The ASOC has operational control of subordinate TACPs. They provide the capability to receive, coordinate, and process requests for immediate air support from the subordinate TACPs. The ASOC is located within the fire support center or element of the Army tactical field element command post. This facilitates rapid coordination and approval of request (AFI 13-106 1997, 2). The Corps ALO is the ASOC director. The assistant director and the Fighter Duty Officers in the ASOC are all manned by ALOs. The ASOC keeps the Air

Operations Center (AOC) advised of the air effort needed to satisfy Army air support requirements and will request additional air resources when requirements exceed the sortie allocation (AFI 13-106 1997, 2). Some AOC positions are manned by ALO qualified personnel.

The TACP personnel are members of either an Air Support Operations Group (ASOG) or an Air Support Operations Squadron (ASOS). The ASOG provides the Corps TACP and has operational control of subordinate ASOSs. Each Army post has an ASOS which provides the personnel for division, brigade, and battalion TACPs. The TACP members work with and routinely train with their aligned Army unit. This follows the "train as we fight" philosophy. The battalion ALO (BALO) is an exception to this philosophy. The BALOs are A/OA-10 pilots currently assigned to flying squadrons. They are by-name-aligned to an Army battalion and are deployed on a temporary duty status (TDY) when requested by the Army unit. This would occur for any contingencies (wartime operations or peacetime exercises). The minimum period that a BALO will be aligned to an Army unit is twelve months. The BALO may be tasked up to eight times for a combined maximum sixty days TDY (AFI 13-106 1997, 25). The Army battalion, therefore, does not work with their assigned BALO except during operational/training exercises. The assigned ETAC for the battalion provides CAS coordination and trains with the Army unit. At the battalion, the ETAC performs the duties of an ALO. When the army unit performs an exercise, the battalion staff is more familiar with the ETAC than the ALO. When the BALO reports for the exercise, the ETAC briefs him on the plan of operations. The BALO program benefits the Air Force because it keeps a pilot operational and mission capable in a flying status. This does not benefit the Army because they do not have an ALO available on a daily basis with whom they can train and work.

Because of the current shortage of rated officers, the Air Force has looked at other means to provide the needed ALOs. There are two manning sources that the Air Force has instituted. First, they use ETACs at the BALO position. Second, they made the ALO duty available to Air-

battle Managers (ABMs). An ABM is an Air Force radar officer who is trained to control and direct aircraft operations including airspace and airfield management (AFMAN 36-2105, 1997). They perform duty on AWACs aircraft and other command and control aircraft. A third approach instituted in the Air National Guard is to train a nonrated officer to perform the ALO duty.

The Air Force recently decided to use ETACs to perform the BALO duty (USAF MSG 1998). The ETAC career field is fairly new to the Air Force. It started in the late 1980s. The enlisted personnel who fill these positions are highly motivated and skilled individuals. They are capable of performing the job of terminal attack control. They assist and train newly assigned ALOs on the radio and other TACP equipment. The ETAC is very familiar with the duties that an ALO performs, but can they perform all the tasks of an ALO? Will the ETAC have credibility with the Army maneuver commander? These are questions begging for answers.

The second option that the Air Force recently implemented is to use ABMs in the ALO duty (USAF MSG 1998). Currently, the Air Force is considering making the ABMs a rated officer position (Jordan 1998, 4). Some questions that the Air Force needs to consider include: Are they qualified to do the Air Liaison Officer duty? Will they volunteer to do an ALO duty? Are there enough ABMs to perform both the ALO duty and the ABM duty?

The third option of using nonrated officers for the ALO duty is the approach taken by the Air National Guard. The ALO shortage is more apparent in the Air National Guard. The Air National Guard does not have the luxury of demanding their pilots perform that duty nor can they offer them the incentive of a possible quality assignment flying a new fighter after an ALO tour of duty. Therefore, they developed a nonrated ALO program to train nonrated officers to perform the ALO duty. In 1989, the Guard Bureau tasked the Illinois Air National Guard in Peoria to test this program. One of the goals was to give a highly qualified ETAC (who had a college degree) the opportunity to receive a commission while continuing to work in the tactical air control field.

The command group interviewed and chose ten candidates from various backgrounds. Four were prior ETACs, and the remaining candidates were one intelligence officer, one supply officer, one security police officer, one F-4 crew chief, one Army Field Artillery officer, and a person with no military experience (a person off the street). Those who were not commissioned were sent to the Air National Guard Academy of Military Science in Knoxville, Tennessee for six weeks. Each candidate was sent to the Air Force Joint Firepower Control Course (JFCC) at Hurlburt Field, Florida, for three weeks. This is the basic course for all ALOs, Forward Air Controllers (FACs), and ETACs. The rest of the training was on-the-job training on weekend drills at the Air Guard facility. The training involved instruction on terminal attack control. This was practiced with the flying unit on the Air Guard base. At that time, Peoria was flying the A-37 Dragonfly. The training military operating area (MOA) was within one hour driving distance that made this a convenient training area. Some tactical rides in the A-37 gave the ALO candidate the opportunity to experience how the pilot views a target area and the procedures and tactics used to conduct a tactical strike. Most of the additional training involved participating in numerous Army command post exercises with a qualified ALO. This ALO was the mentor for the nonrated ALO officer candidate. Most required training was accomplished in six to nine months.

The Guard Bureau evaluated the performance of the nonrated ALOs during a Battle Command Training Program (BCTP) exercise at Fort Leavenworth, Kansas in August 1991. They determined that the nonrated ALOs accomplished the duty as well as rated ALOs. Essentially, the Air National Guard created a career ALO. Usually, a typical active duty ALO tour is two or three years. In the Air National Guard, a nonrated ALO will be in that duty position his entire career. There are opportunities for promotion to the rank of lieutenant colonel, which is a brigade ALO.

The nonrated ALO program confirmed that any officer could perform the ALO duty. The prior ETACs had knowledge of TACP operations, terminal attack control, aircraft, weapons effects, and the radio systems. Therefore, they had few additional ALO tasks to learn. The Army Field Artillery officer had experience working in Army tactical operation centers, knowledge of Army operations, and fire support coordination. Consequently, he was already trained on those tasks. The individual's background determined the additional required training. The candidates that performed well had great enthusiasm for learning and performing the ALO duty. The F-4 crew chief and the person with no military experience were excellent ALO candidates. They proved that attitude concerning the ALO duty was the most important skill.

Assumptions

A key assumption for my thesis is that the Air Liaison Officer duty will continue to be a required position on the Army maneuver commander's staff. Current U.S. joint doctrine requires close integration of Air Force assets and Army maneuver assets. Because of all the required coordination needs, the ALO duty will continue to be a demanding and critical position. Further assumptions include the following:

1. It is not a popular duty assignment for Air Force rated officers.
2. ALOs normally will not volunteer for another ALO tour.
3. It takes an ALO three to six months to become proficient in the duty.
4. An ALO does not have to be a rated officer.

Further research will prove or disprove these four assumptions.

Limitations

This thesis does not address the Theater Airlift Liaison Officer (TALO) duty. The TALO is another duty position in the TACP at the Brigade, Division and Corps levels (AFI 13-106, 1997).

Key Terms

Army Air-Ground System (AGS). The Army system which provides for an interface between Army and tactical air support agencies of other Services in the planning, evaluating, processing, and coordinating of air support requirements and operations. It is composed of appropriate staff members, including G-2 Air and G-3 Air personnel, and necessary communication equipment (Joint Pub 1-02 1994).

Air Battle Manager (ABM). Performs and manages air battle management (ABM) operations functions and activities. Effects control of assigned forces. Plans, organizes, and directs operations, including airspace and airfield management, weapons control, coalition integration, sensor system management, operations management activities, and adjutant duties (AFMAN 36-2105 1997).

Air Liaison Officer (ALO). An officer (aviator/pilot) attached to a ground unit who functions as the primary advisor to the ground commander on air operation matters (Joint Pub 1-02 1994).

Air Operations Center (AOC). The principal air operations installation from which aircraft and air warning functions of combat air operations are directed, controlled, and executed. It is the senior agency of the Air Force Component Commander from which command and control of air operations are coordinated with other components and Services. Also called AOC (Joint Pub 1-02 1994).

Air Support Operations Center (ASOC). An agency of a tactical air control system collocated with a corps headquarters or an appropriate land force headquarters, which coordinates and directs close air support and other tactical air support (Joint Pub 1-02 1994).

Air Support Operations Group (ASOG). An Air Force unit that provides the Corps TACP. It is a subordinate unit of a Numbered Air Force (NAF). The ASOG has operational control of the Air Support Operations Squadrons (ASOS) (AFI 13-106 1997).

Air Support Operations Squadron (ASOS). An Air Force unit that provides TACP's to the Army maneuver units (Division, Brigade, Battalion). They are located on Army Posts. They are subordinate units of an Air Support Operations Group (ASOG) (AFI 13-106 1997).

Battalion Air Liaison Officer (BALO). BALOs are OA-10, FAC-Airborne (FAC-A) qualified pilots assigned to an A/OA-10 squadron. They deploy TDY to support their by-name-aligned Army unit (battalion) where they are attached to the co-located Air Support Operations Squadron. When associated with the aligned battalion the BALO reports to the brigade ALO (contingencies, wartime or peacetime exercises). During operations, when not employed with the aligned battalion, the BALO reports to the A/OA-10 squadron commander. The BALO usually has the rank of Lieutenant or Captain (AFI 13-106 1997).

Close Air Support (CAS). Air action by fixed and rotary-wing aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. Also called CAS (Joint Pub 3-09.3 1995).

Combat Control Team (CCT). A small task organized team of Air Force parachute and combat diver qualified personnel trained and equipped to rapidly establish and control drop, landing, and extraction zone air traffic in austere or hostile conditions. They survey and establish terminal airheads as well as provide guidance to aircraft for airlift operations. They provide command and control, and conduct reconnaissance, surveillance, and survey assessments of

potential objective airfields or assault zones. They also can perform limited weather observations and removal of obstacles or unexploded ordinance with demolitions. Also called CCT (Joint Pub 1-02 1994).

Enlisted Terminal Attack Controller (ETAC). A Tactical Air Command and Control Specialist (AFSC 1C4X1) who is also qualified and certified in the terminal attack control (TAC) procedure (AFI 13-102 1996).

Fighter Duty Officer (FDO). A position in the ASOC that is manned by Air Liaison Officers. Responsible for the planning, coordination, and execution of CAS and reconnaissance missions. The FDO advises the ASOC Director and staff on matters pertaining to CAS (AFI 13-106 1997).

Fighter Liaison Officer (FLO). Advises the ALO and the Army commander's staff on the capabilities and employment of available air assets including reconnaissance assets (AFI 13-106 1997).

Forward Air Controller (FAC). An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support of ground troops (Joint Pub 1-02 1994).

Forward Air Controller Airborne- FAC(A). A specifically trained and qualified aviation officer who exercises control from the air of aircraft engaged in close air support of ground troops. The forward air controller (airborne) is normally an airborne extension of the tactical air control party. Also called FAC (A) (Joint Pub 1-02 1994).

Fratricide. The employment of friendly weapons and munitions with the intent to kill the enemy or destroy his equipment or facilities, but results in unforeseen and unintentional death or injury to friendly personnel (FM 100-5 June 1993).

Joint Firepower Control Course (JFCC). A three-week course that teaches the basics of the tactical air control system and the Army air ground system. All ALOs and ETACs are

required to attend this course for their duty assignment. This course is currently instructed at Nellis Air Force Base, Nevada.

Rated Officers. An aeronautical rated Air Force officer. This category includes pilots, navigators, and weapon system operators (WSO).

ROMAD. An acronym for Radio Operator, Maintainer, and Driver. This is an enlisted member of a TACP. This is an old term that is still in use today. The current official term for an enlisted member of the TACP is a Tactical Air Control Specialist with an Air Force Specialty Code of 1C4 (Knox 1989).

Tactical Air Command and Control Specialist. Airmen with the AFSC of 1C4X1 who are members of the TACP. They are primarily responsible for establishing and maintaining communications with other TACPs (AFI 13-106 1997).

Tactical Air Control Party (TACP). A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and for the control of aircraft (Joint Pub 1-02 1994).

Tactical Air Control System (TACS). The organization and equipment necessary to plan, direct, and control tactical air operations and to coordinate air operations with other Services. It is composed of control agencies and communications-electronics facilities which provide the means for centralized control and decentralized execution of missions (Joint Pub 1-02 1994).

Tactical Air Support. Air operations carried out in coordination with surface forces and which directly assist land or maritime operations (Joint Pub 1-02 1994).

Terminal Control. Terminal control is defined as: (1) the authority to direct the maneuver of aircraft which are delivering ordnance, passengers, or cargo to a specific location or target. Terminal control is a type of air control, and (2) any electronic, mechanical, or visual control given to aircraft to facilitate target acquisition and resolution (Joint Pub 1-02 1994).

Summary

There is a shortage of rated officers to be assigned to the ALO duty. This has contributed to an ongoing problem the Air Force has in manning the ALO duty positions. The Air Force has instituted alternative manning sources to resolve this problem. There are three ALO manning options currently used. First, the Air Force has assigned ETACs to some of the BALO positions. Second, ABMs are being assigned to the ALO duty. Third, the Air National Guard is using nonrated officers in ALO duty positions. Should the active Air Force develop an ALO career field? Would a career field help resolve current manning problems and other ALO issues? Would a career field improve the ALO duty? These are questions that the thesis will answer.

CHAPTER 2

LITERATURE REVIEW

The literature review found various documents relating to the ALO duty requirement. These documents included Army, Air Force and Joint military publications. Only one document directly related to the thesis topic. This was a report from the Department of the Air Force on the establishment of an ALO career field. Other documents reported on ALO issues and manning problems but did not mention a development of an ALO career field. These included minutes from past ALO worldwide conferences, Air Force messages, staff briefings, and periodicals. These documents were reviewed to identify a possible need for a career field and to answer the thesis supporting questions pertaining to ALO qualifications and training.

U.S. Army Publications

Army, Air Force and Joint publications were reviewed to determine the stated duty requirements of the ALO duty. FM 101-5, *Staff Organization and Operations*, issued by Headquarters, Department of the Army, Washington, D.C., 31 May 1997, was a good starting point because it described the functions of all staff members in an Army unit to include the ALO. The ALO duty is described in FM 101-5 as follows:

The Air Liaison Officer is the special staff officer responsible for coordinating tactical air assets and operations such as close air support (CAS), air interdiction, joint suppression of enemy air defenses (SEAD), reconnaissance, and airlift. The ALO is the senior Air Force officer with each tactical air control party (TACP). An ALO is authorized at corps, division, and brigade levels. Besides his common staff responsibilities, the ALOs specific responsibilities are as follows:

- Advises the commander and staff on the employment of tactical air (TACAIR).
- Operates and maintains the Air Force TACAIR direction radio net and air request net.
- Transmits request for immediate close air and reconnaissance support.
- Transmits advance notification of impending immediate airlift requirements (Tactical airlift liaison officer).
- Coordinates tactical air support missions with the fire support element and the appropriate AC2 element.

- Recommends IR (intelligence requirements) to the G-2 through the G-3.
 - Acts as liaison between AD (air defense) units and air control units.
 - Helps plan the simultaneous employment of air and surface fires.
 - Supervises forward air controllers (FACs) and the TACP.
 - Integrates air support sorties with the Army unit scheme of maneuver.
 - Participates in targeting meetings.
 - Serves as a member of the targeting cell.
 - Helps the fire support officer (FSO) direct air strikes in the absence of a FAC.
 - Provides Air Force input into the AC2 (army airspace command and control).
- (FM 101-5 1997, 4-22)

It is important to note the first duty listed is to advise the commander and staff on the employment of tactical air. This duty statement is repeated in all Army manuals reviewed.

Army Field Manuals for each echelon of command provide further description of the ALO duties. At the Corps level, Army publications FM 100-15, *Corps Operations* (October 1996), states there are two Air Force elements that provide the Army corps with qualified liaison personnel to achieve the necessary degree of joint coordination (the ASOC and the TACP). FM 100-15 refers to FM 101-5 to discuss specific responsibilities of staff members (ALO). As noted above, the ALO's primary duty is advising the commander on the use of air assets. FM 100-15 also states that the ALO is involved with the plans cell, current operations cell, and the intelligence cell. In addition, as a representative of the ASOC at the corps level, the ALO is part of the fire support cell and the deep operations coordination cell. The manual states that the ALO helps the G3 plan the employment of forecasted interdiction sorties. The duties of the fighter liaison officer (FLO) are also stated. The FLO duties are the same as the ALO duties and include the following:

- Operates with the current operations cell, the plans cell, and the fire support cell of the main CP.
 - Advises on the capabilities of USAF offensive resources.
 - Helps develop Army request for pre-planned fighter support.
 - Request Army J-SEAD support.
 - Coordinates with the corps fire support cell and the A2C2 element to integrate artillery fire and air missions.
 - Coordinates USAF scatterable mining missions with corps engineers.
- (FM 100-15 1996, 4-22)

The ALO duties at the corps level clearly emphasize future planning for the use of air assets. There will be more than one ALO at this level to accomplish all the required planning.

At the division level FM 71-100, *Division Operations* (August 1996), states that the ALO duty is to "coordinate and integrate air support with tactical operations and provide a central facility through which requests for CAS are processed." (FM 71-100 1996, 3-26). Further the TACP is responsible for advising the ground commander on the use of CAS along with controlling employment of CAS. This field manual describes the CAS request and coordination channels and states that the ALO along with the G3 air and FSCOORD (fire support coordinator) should review the preplanned CAS request to determine the suitability of the target for air attack and for potential airspace conflicts. Emphasis at this level is coordination of airspace, the targeting process and fully integrating and synchronizing air operations with ground operations.

The brigade level FM also gives a general description of the ALO duty. In FM 71-3, *The Armored and Mechanized Infantry Brigade* (1996), the ALO is described as follows.

The air liaison officer (ALO) is an Air Force officer who is a member of the tactical air control party (TACP). The ALO is the Brigade commander's advisor on support that includes the employment of TACAIR as CAS, joint suppression of enemy air defenses (JSEAD), reconnaissance, and airlift. The ALO coordinates CAS missions with the FSE. The ALO provides the commander and staff enemy TACAIR and air defense capabilities. The ALO supervises the TACP and forward air controllers (FAC). The ALO is located with the command group. (FM 71-3 1996, 3-7)

The brigade tactics emphasize the use of fire and maneuver to destroy, delay, or disrupt enemy forces. It also mentions the importance of integrating and synchronizing a variety of functions to generate overwhelming combat power at the decisive points. It is presumed that the ALO is responsible to assist in this synchronization process.

The battalion ALO duty was the most evasive in the Army publications. FM 71-2, *The Tank and mechanized Infantry Battalion Task Force*, mentions the forward air controller (FAC) and ALO interchangeably but most references were to the FAC. It describes the FAC duty as controlling air strikes and coordinating with the FSO for fire support and ACAs (Airspace

coordination areas). At the task force level, it states that CAS missions are usually planned in support of deliberate attacks. This FM incorrectly states preplanned air missions are requested a day ahead. This depends on the ATO cycle that may require the preplanned request to be submitted seventy-two hours before the intended day of operation. There are no formally stated duties of the ALO in this manual, but rather a procedure of how CAS is used and executed.

The ALO duty is basically the same at each echelon with the primary responsibility as advisor to the Army commander on the employment of tactical air. The corps and division level ALO involved more future planning, the Brigade level ALO duty involved more current operations, and the battalion level ALO duty involved more execution and direct control of aircraft (FAC). There are no statements in the Army publications saying the ALO needs to be a rated officer. FM 71-2 did state the FAC was a fighter pilot.

U.S. Air Force Publications

Two primary Air Force instructions that pertain to the tactical air control mission are Air Force Instruction (AFI) 13-106, *Air Support Operations Centers and Tactical Air Control Parties*, and AFI 13-102, *Air Support Operations Center (ASOC), and Tactical Air Control Party (TACP) Training and Evaluation Procedures*. AFI 13-106 describes the organization and missions of the ASOC and TACPs. This instruction also states the functions of the ALO. The first function listed is to represent the Air component commander as the senior air advisor to the appropriate Army commander. The following are the stated functions and responsibilities of an ALO as listed in AFI 13-106.

- Represents the Air Component Commander as the senior air advisor to the appropriate Army commander.
- Advises the Army commander and staff on the capabilities and proper use of air power.
- Responsible for the operations of the AFARN (Air Force air request net) and TAD (tactical air direction) nets.
- Coordinates and transmits request for immediate air support.
- Assists Army counterparts in the preparation of preplanned air support requests.

- Assists in the preparation of Army plans dealing with tactical air support.
- Coordinates tactical air support missions with the FSE (fire support element) and the appropriate Army Airspace Command and Control (A2C2) element.
- Integrates air support sorties with the Army unit scheme of maneuver.
- Ensures a terminal attack control qualified ALO or Enlisted terminal Attack Controller (ETAC) is available to control CAS missions.
- Keeps abreast of Army ground operations and informs the appropriate USAF agencies of the situation.
- Responsible for assigned Air Force TACP personnel and equipment.
- Reports operational status of assigned equipment to the ASOC and ensures that requests for Air Force unique supply items are forwarded to the ASOC.
- Coordinates with Army staff agencies on TACP facilities, messing, POL support, and maintenance of vehicles and equipment.
- Above battalion level, coordinates training opportunities with Army staff for ALOs to improve Army knowledge of TACP utility.
- Maintains currency of AGOS-provided lesson plans for use in training the Army staff. (AFI 13-106 1997, 9)

A majority of the above tasks relate to advising, coordinating, and planning functions.

Also stated in this instruction is the statement that functions and responsibilities vary in scope and degree with the level of command supported. This was consistent with reviews of Army publications.

Battalion ALO duties were listed separately in AFI 13-106 as follows.

- Coordinates with the ground commander on employment of tactical air support.
- Maintains a station on the AFARN, TAD net and appropriate Army net(s).
- Transmits Army requests for immediate air support.
- Coordinates all air support requests, including J-SEAD (Joint- Suppression of Enemy Air Defenses) and JAAT (Joint Army Air Attack Team), with the FSE and A2C2.
- Forwards weather observations to the ASOC as required.
- Performs CAS terminal attack control.
- Reports mission results to flight lead.
- Advises fire support personnel or the Army commander when aircraft will enter and have cleared the target area.
- Passes intelligence information to the ASOC and appropriate S-2.
- Trains battalion staff on TACP utility and Air Force asset capabilities. (AFI 13-106 19967, 10)

A majority of these tasks pertain to execution of the CAS mission. The control and coordination of CAS is accomplished usually at this level.

Air Force Instruction (AFI) 13-102, *Air Support Operations Center (ASOC) and Tactical Air Control Party (TACP) Training and Evaluation Procedures*, 1 September 1996, describes the

training and evaluation that is required for ALOs and TACP personnel. The formal school requirements are:

All ALOs and FDOs must complete the ACC-JFCC or the USMC TACP School. Individuals should complete the ACC-JFCC en route to their initial ASOC or TACP assignment. Completion of the Joint Air Operations Staff Course is desirable but not required (AFI, 1996, 6).

This instruction lists general tactical training topics such as navigation, communication procedures, and camouflage procedures. It also identifies training on the US Army organization, employment doctrine, deliberate planning process, and Army air ground system. There is an additional block of training called terminal attack control (TAC). This training involves the procedures used in controlling air strikes. The AFI 13-102 states that all BALOs and one ALO per brigade must be terminal attack control certified.

The AFI 13-106 and AFI 13-102 do not state that the ALO is required to be a rated officer. The AFI 13-102 does state the BALO is a fighter-rated officer aligned to an Army unit and performs the ALO duty on a TDY basis while permanently assigned to a fighter squadron (Exception being Ranger Battalion BALOs and Air National Guard BALOs).

Joint Publications

Joint Publication 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)*, 1 December 1995, describes the ALO duty with similar wording as that used in the Army manuals.

The ALO is the officer member of the TACP. The ALO advises the commander on CAS employment and assists with planning and coordination. The ALO may also perform terminal control. (JP 3-09.3 1995, 11-8)

The Forward Air Controller (FAC) duties are described as follows:

The FAC is an aviator who, from a forward ground or airborne position, controls aircraft in close air support of ground troops. The FAC can operate on foot, from ground vehicles, or from fixed or rotary wing aircraft. The FAC/ALO must: 1) Know the enemy situation, selected targets, and location of friendly units. 2) Know the supported unit's plans, position, and needs. 3) Validate targets of opportunity. 4) Advise the maneuver

force commander on proper employment of air assets. 5) Submit immediate request for CAS. 6) Control CAS with maneuver commander's approval. 7) Perform battle damage assessment (BDA) (JP 3-09.3 1995, 11-8).

Joint publication 3-09, *Doctrine for Joint Fire Support*, 12 May 1998, establishes doctrine and procedures for planning, coordinating, and executing joint fire support. It states that commanders and their staffs must synchronize joint fire support to increase the total effectiveness of the joint force. This manual did not state the duty of the ALO but it reinforced the importance of the ALO duty in the current joint force military.

Periodicals

The *Air Force Times* published an article that pertained to the manning and training of the ALO called "Service adds 57 new slots for ALOs" (*Air Force times* 1991, 8). This article described the ALO as pilots who advise the Army commanders on tactical air support. The article further reported that personnel managers fear they will have trouble finding enough pilots to sign on for this arduous duty. "Nobody is (inclined) to ride around in a Humvee or (with) an infantry unit," said Major Al Meador (at the Air Force Military Personnel Center at Randolph AFB, Texas). "Most pilots don't want to be here," said Capt Tim Collins (now Col Collins) an ALO with the 1st Battalion, 75th Ranger Regiment. "We'd rather be flying" (Smith 1991, 8).

The article mentions some incentives used to attract pilots to ALO duty including giving ALOs priority over other pilots when determining the next assignment. Also, Maj Nick Fuerst at the Air Force Military Personnel Center said that being an ALO is a "method of improving one's odds of getting a new airplane" (Smith 1991, 8). ALO training includes attending a three-week course at the Air Ground School at Hurlburt Field Florida. Col George Cox, school commandant, said, "an ALO is not fully qualified until he has worked with his unit" (Smith 1991, 8). This article highlights the ALO manning problem and the fact that ALOs do not report to duty fully trained to perform the ALO mission.

Another article, "Air-battle Managers will be rated" (*Air Force times* 1998, 4) identifies a potential additional source for ALOs. The article defines the air-battle managers (ABMs) as officers who monitor the radar systems to direct attack planes in combat. It stated that senior Air Force leaders agreed in February 1998 to make this career field a rated status, but that the pentagon and Air Combat Command Headquarters at Langley Air Force Base, Virginia has not made a final decision.

The air-battle manager (ABM) career field is also facing critical shortage problems. One source mentions that manning levels are at 69 percent. By making ABMs a rated career field, the Air Force would have more pilots available for operational units (flying status). Increasing the rated ranks would mean more nonpilots would be available for rated staff jobs. Making the career field rated would also create new opportunities for promotion and command slots. Maj (ret) Wes McDaniel said, "Our field has always been a dead end. That's why you don't see many colonels (from the career field) and you never see a general. If the field receives the aviation rating that situation could change" (Jordan 1998, 4). Capt John Spencer (an instructor at the 325th Training Squadron, Tyndall, Air Force Base) said, "It'll go a long way to letting us in the fraternity (of pilots and navigators)" (Jordan 1998, 4). Capt Spencer noted that career progression stops usually at the Lieutenant Colonel rank because there is nowhere else to go. He states, "what I'm hoping is that (being rated) will bust open the pyramid at the top--possibly to the O-6, O-7 and O-8 (Colonel, Brigadier General, Major General) ranks" (Jordan 1998, 4).

Currently the ABMs are considered for some ALO duty positions. As this article mentions, this career field is also having manning problems. It is unlikely that ABMs will volunteer for an ALO duty unless there is a chance for better career progression. If that is the situation, the problem of not having an ALO that is familiar with the duty and mission will still exist. The Air Force will continue to have a Lieutenant Colonel or Colonel position (in an ASOS or ASOG) filled with an officer that knows very little about the TACP issues or problems.

"Can Nonaviators Be Forward Air Controllers?" (*Marine Corps Gazette* May 1989, 36-37), supports the idea of training infantry officers to perform the tactical air control mission in the Marine Corps which parallels the Army--Air Force ALO. The writer, a Marine aviator F/A-18 pilot, states that based on his experience at the battalion level as a FAC (forward air controller), it is not necessary to be an aviator to be a good FAC. He contends that it would be more efficient from the standpoint of money spent in training aviators to use them in flying positions and not on the ground as FACs. He states:

A properly trained ground officer can be just as effective and safe in controlling air as the average naval aviator/naval flight officer. Control of air from the ground does not require skills specifically reserved for aviators. It requires common sense, the ability to think during a tactical situation, and technical training as a FAC. All of these skills can be readily acquired by ground officers. (Brownlowe 1989, 36)

This article supports the assumption that an ALO does not have to be a rated officer.

Most of the ALO duty at the Battalion level involves the execution and the controlling of CAS assets.

Other Sources

Lieutenant Colonel Raymond O. Knox (now Colonel) suggested to The Department of the Air Force, Air Staff at the Pentagon, Washington, D.C., that the Air Force establishes an ALO career field (September 1997). Knox was an ALO and a member of the 25th ASOS in Hawaii. It was endorsed through the chain of command up to Headquarters, Pacific Air Force and sent to Headquarters United States Air Force. Ultimately, HQ USAF disapproved the suggestion on 26 October 1998.

In the report, Knox identified ALO manning problems and training issues. He explained that with the present shortage of fighter pilots and weapon system operators (WSOs) the Air Force was forced to send nonfighter AFSCs to the ALO billets. These AFSCs include bomber crewmembers, instructor pilots (FAIPS--first assignment instructor pilot) who have no prior

fighter experience, and 13BX (ABMs). He points out that it is important to note that the ALO training has not changed despite these nonfighters AFSCs coming into the ALO billets. Another problem mentioned is continuity in leadership. He writes, "Air Support Operations Squadron (ASOS) commanders rarely have ALO experience, but are expected to lead TACPs led by career NCOs. Every two years officer leadership in ASOSs change is 100%" (Knox 1998, 21). This short-term leadership, he points out results in cancellations of long-term projects, and long-range planning only extends two years. This creates problems with morale among the enlisted members of the ASOSs, service to the customer (Army), and does not help the tactical air control mission.

He suggested that an ALO career field be established to help solve the current ALO problems. Knox proposed two methods to accomplish this. First, merge the ALO career with the combat control team (CCT) career field. This would have two advantages: (1) enlarging the officer base of CCTs and (2) increasing the assignment opportunities for that AFSC (Air Force specialty code).

The second method Knox suggested was to create a separate career path for ALOs and actively recruit and grow ALOs to fill critical positions. He suggested that those officers from AFSCs, such as CCTs and Security Forces, could be recruited. He points out that detractors may say this career field would be too small to be viable to which he answers, "if the CCTs are large enough to be viable...so would be the ALO field" (Knox 1998, 21).

For both methods he suggested the Air Force would have to create a school that teaches how to be an ALO. He also states, "in order to maintain a constant inflow of current, aircraft-specific, close air support tactics, techniques, and procedures, some positions (two maximum) should still be filled by experienced fighter aircrewmembers" (Knox 1998, 21).

There were six benefits described by Knox in his report. (1) There would be continuity in officer leadership. He states, "growing officers from Lt. to Col. in career field will make them experts rather than guest help" (Knox 1998, 22). (2) Professional ALOs would offer continuity in

equipment acquisition and career field management at Air Staff. He points out that currently these decisions are made by individuals with no ALO background. (3) This would create greater respect for the Air Force by the Army. Knox describes the perception is that ALO tours are a dumping ground for unwanted or sub-par officers and that an examination of the manning worldwide would find a number of deferred or disgruntled officers performing the duty. He points out that the Army picks up on this. (4) A career field would improve morale among the enlisted members of the ASOSs. He states that the perception among the enlisted is they are the forgotten ones of the Air Force. As he states, "every two years they have to train up a new set of officers to lead them" (Knox 1998, 23). (5) With a career ALO, 80 percent of those currently performing the ALO duty could return to the cockpit. This would be a more efficient use of taxpayers dollars. Finally, (6) there would not be a need to bring nonfighter assets into the TACP. Bomber aircrewmembers and ABMs would not be required and this would be a more efficient use of the specially trained Air Force assets.

The report was disapproved by Air Staff for the following reasons. First, it stated the Air Force conducted a bottom-to-top review of Tactical Air Control Party (TACP) and Air Support Operations Center (ASOC) manning, to include all ALO positions and reduced by 22 percent (Air Force wide) the ALO positions. The reports states, "these billets will be filled with a mix of fighter, bomber, and air battle managers for their expertise in fighter, airlift, bomber, and command and control operations. The Chief of Staffs of the Air Force and Army agreed to the manpower realignment at the 1997 Warfighter Talks" (Knox 1998, 2).

The second reason was that, "the transient nature of ALOs brings an inflow of current operational flying into TACP/ASOCs and provides an outflow of current Army Tactics, Techniques, and Procedures (TTP) back to the Air Force flying community.... The cross-flow of TTP and this valuable understanding of our sister service would not be possible with a separate ALO career field" (Knox 1998, 2). The report continues by saying that few acquisition corps

officers have experience in the mission areas they support and therefore rely on field operators and functional managers. It states that the functional managers on the Air Staff and ACC staff all have operational ASOC/TACP and ALO experience. Finally, the report declares, "developing a career path for such a small number of officers is not feasible. There are no ALO positions for officers in grades O-1 or O-2, and only a few O-3 positions. The lack of company grade officers would require feeder AFSCs to create a career path. The narrow range of assignments/duties precludes adequate officer progression and professional development for a separate career field" (Knox 1998, 4).

These reasons did not fully address the ALO career field idea and there was no mention of any research to support the decision. First, it does not address the problem but just eliminates positions. The Air Force now has 22 percent fewer ALO positions, yet still needs ABMs and ETACs to adequately man them. The question may be how does 22 percent fewer ALOs affect the tactical air control mission? How does this reason not support the creation of an ALO career field? The second reason pertains to the inflow and outflow of TTPs to each service. It can be argued that some current ALOs do not return to a flying position but retire. The creation of an ALO career field does not mean there would be no rated officers performing that duty. In fact, Knox recommends that two positions should be filled by experienced fighter aircrewmembers in order to maintain this inflow and outflow of TTPs.

The CCT career field (AFSC 13D) has 61 officers on the manning document according to the Air Force Military Personnel Center (AFMPC) (Simpson 1999). There are approximately 215 current active duty ALO manning positions according to AFMPC (Sanders 1999). The CCT career field has fewer officers than the current ALO manning positions, yet they have a career field. This does not support the last reason given in the disapproval report. If the Air Force wanted to create an ALO career field, O-1 and O-2 grades could be developed in the manning documents. There is a wide range of assignments that are possible. Besides the ASOS positions,

there could be duties in Air Operation Centers and Air Staffs. Each of the reasons against could be countered with a reason for the creation of an ALO career field.

This report by Col Knox verified that there are current problems with the ALO duty and suggested that a separate ALO career field might be a viable solution. Although the Department of the Air Force disapproved the report, it did introduce the issue to the higher headquarters and initiated awareness to this idea.

Knox also published a monograph titled "The Terminal Strike Controller: The Weak Link in Close Air Support", (1988). He described the history of the ALO, FAC, and ETAC duty and the evolution of the tactical air control mission and duties. He explained how the American military always relearned the lessons on the employment of tactical air from prior conflicts (World War II through Vietnam). He then discussed the current situation in the U.S. Military relating to the terminal strike control of CAS, and the beginning of the ETAC program. He finished his report by listing shortfalls to the current system one of which was the ALO manning problem.

In his research, Knox reported that the Marine Corps quickly developed ground support techniques in the Pacific Theater such as an air forward observer. The idea was copied from the Royal Australian Air Force who had an infantry or artillery officer give briefings to the pilots not another pilot (Knox 1988, 5). In the Mediterranean Theater of operations, the first use of fighter pilots as ground FACs were employed and were nicknamed Rover Joe. Knox reports, "Rover Joe was not a highly desired job in the Air Force at the time--but the Air Force, struggling to separate itself from the ground forces, was reluctant to let anyone other than qualified fighter pilots brief pilots in the air" (Knox 1988, 8).

The evolution of the ETAC program was explained in the report. Knox stated, "Prior to 1986 (except for program verification) the AF [Air Force] had restricted the terminal control of CAS to ALOs, AFACs, and GFACs, who by definition and doctrine were rated (pilot/weapon

system officer) officers. As a result of rated manpower shortages and a need for more qualified terminal air strike controllers the AF instituted a training program for selected enlisted members of TACPs" (Knox 1988, 15). Today the ETAC program is a big part of the TAC mission that provides terminal control trained personnel to the Army. Most of the Control of CAS on the ground is done by ETACs. Again this report identifies a manning problem thirteen years ago. A MOA in 1984 between the Army and the Air Force, is mentioned in the monograph. Part of the MOA included "Initiative 25" which focused on liaison and strike control. This initiative proposed a study in two areas. First, both services agreed on a need for improvement in training for ALOs and FACs. Second, both services agreed to conduct an in-depth review of the TACP structure. The possibility of supplementing the battalion FACs with nonrated officers was mentioned. As Knox reports, "For the first time the two services agreed that other than a rated pilot could act as a FAC" (Knox 1988, 18). This review resulted in much needed changes in the TAC mission and structure but did not improve on the ALO assignments or manning problems.

The requirements to be an ALO are addressed in the Knox monograph. He states the following:

To become an ALO the requirements are simple. According to AFR 36-1, Officer Personnel/Officer Classification, if you are a qualified weapons system officer (WSO) you must meet a great many qualifications, none of which are extraordinary, and none of which particularly qualify an officer to lead a TACP into combat. While other requirements that do not relate to the ALO job are mentioned, knowledge of Army tactics, Airland Battle Doctrine, or the TACS is not mentioned at all. (Knox 1988, 32)

Summary

There was only one direct source document related to the topic of developing a career field for the ALO duty--the Air Force Idea (Suggestion) Evaluation and Transmittal package. Therefore, most of my literature review consisted of military publications that described the ALO duty and training requirements, and other sources that describe ALO issues. The definition of an ALO, according to Joint Pub 1-02, is an officer (aviator/pilot) attached to a ground unit who

functions as the primary advisor to the ground commander on air operation matters. The only consistent statement from all Army echelon publications was the reference to the ALO as an advisor to the maneuver commander. The ALO duty varies according to the amount of planning and execution of the tactical air missions at each echelon of command. Higher echelons involve more future planning while lower echelons involve more current operations and execution.

The Knox monograph explained the history of the ALO and ETAC duty and identified recurring problems pertaining to manning the ALO position. It mentioned the first use of an air forward observer by the Royal Australian Air Force was not a pilot but an infantry or artillery officer. Initiative 25 (part of a 1984 MOA) was referenced that identified the possibility of supplementing the battalion FACs with nonrated officers.

The Knox ALO career field IDEA report was significant to this research because it highlights the current problems with the ALO duty. It stated there is a manning problem that currently has non-fighter AFSCs performing the ALO duty with little additional training. In addition, the two-year tour creates no continuity in leadership for the ASOSs and affects morale among the enlisted personnel in the squadrons. He proposed two methods that could be considered for the creation of the ALO career field and also listed six benefits. The Air Staff's reasons for disapproval were noted but do not appear substantial.

CHAPTER 3

METHODOLOGY

Should the U.S. Air Force develop an Air Liaison Officer career field? The approach used to answer this research question started with a literature review to identify the ALO duty. Specifically, literature was researched to determine trends or recurring issues that would warrant the need to develop an ALO career field. The research would answer the following supporting questions.

1. What is the job description (tasks) by echelon for the ALO duty?
2. What are the skills and knowledge needed to perform the ALO duty?
3. What are the various possible manning sources of ALOs?
4. Does the ALO need to be a rated officer?

The answers would help determine the qualifications for ALOs and the feasibility of an ALO career field.

There are additional questions that relate to the ALO duty performance and training that this study will explore.

1. Is the Air Force meeting the Army requirements of providing a qualified ALO?
2. Does a newly assigned ALO arrive at his duty station with the necessary training to perform the job or is it on-the-job training?
3. How long does it take an ALO to become proficient in the duty assignment?

From the literature review, the formally stated ALO requirements and tasks at each echelon were determined. Army, Air Force, and Joint publications were reviewed to determine the documented requirements of the ALO duty. Specific attention was given to any statements of distinctive skills or knowledge.

A survey was the instrument chosen to acquire opinions from the field and to develop a descriptive statistical analysis. Three written surveys were developed and administered (appendix A to C). They were sent to current ALOs, current Air Force enlisted Tactical Air Command and Control Specialist (AFSC 1C4 or ROMADs), and current Army leadership (commanders, executive officers, operation officers, air operation officers, and fire support officers). These Army officers were selected because the ALO most often works for or with those officers.

The surveys were sent to all Air Force Air Support Operation Groups and Air Support Operation Squadrons (both active and Air National Guard). Surveys were sent to 220 active duty ALOs and to 220 ROMADs. Active duty ALOs returned 115 surveys and the active duty ROMADs returned 175 surveys. Surveys were sent to 60 Air National Guard ALOs and 60 ROMADs. The Guard ALOs returned 16 surveys and the Guard ROMADs returned 35 surveys.

Surveys were sent to one Army Corps Artillery Headquarters, six Army Division Headquarters, two Armored Cavalry Regiments, and seven Army National Guard enhanced Brigades. A total of 210 surveys were sent to active duty Army units and 95 surveys were returned. A total of 140 surveys were sent to Army National Guard units and 5 surveys were returned.

The number and type of questions varied on each of the surveys but there were some key questions asked of all personnel. Those questions pertained to: (1) ALO tasks, skills, and knowledge, (2) the various manning sources, (3) opinions as to the thesis question, and (4) opinions as to the ALO/ Tactical Air Control mission. All three surveys contained demographic questions as to the individuals current rank, duty position, background, type of unit supported, and military component (active or reserve/national guard). This information provided data as to the experience level of the surveyed individual and data to compare various types of units. It also identified any differences between active duty personnel and National Guard or Reserve.

The following questions were asked of all individuals to obtain opinions as to the ALO tasks, skills, and knowledge needed to perform the ALO duty:

1. Number the following ALO tasks in order of priority - 1 (highest priority) through 13 (lowest).
 - ___ Advise the Army Commander on capabilities and proper employment of USAF assets.
 - ___ Assist the Operations officer and/or FSO, plan the integration of CAS and Air Interdiction into the operations scheme of maneuver.
 - ___ Direct the control of Close Air Support Aircraft.
 - ___ Submit Pre-planned Air requests.
 - ___ Submit Immediate Air Request.
 - ___ Coordinate with fire support on the deconfliction of airspace.
 - ___ Coordinate with fire support on marking rounds and SEAD operations.
 - ___ Provides Air Force input into the A2C2 operations.
 - ___ Attend Targeting meetings and assist in the targeting process.
 - ___ Operates and maintains the Air Force Air request net and the TACAIR direction net.
 - ___ Command the TACP element.
 - ___ Pass information to the Intelligence officer.
 - ___ Other (please identify)
-
-
-

2. Which of the following skills or knowledge are essential to be an ALO. (Circle only the items that are a must)?
 - a. Knowledge of Aircraft weapons and their effects.
 - b. Knowledge of Aircraft tactics and employment.
 - c. Experience in the Fighter Cockpit doing CAS.
 - d. Knowledge of the Targeting process.
 - e. Knowledge of the Military Decision-Making Planning Process.
 - f. Knowledge of radio systems.
 - g. Experience in the Cockpit as an AFAC.
 - h. Knowledge of enemy air defenses.
 - i. Knowledge of Army operations.
 - j. Knowledge of Army Staff coordination.
 - k. Knowledge of other Fire Support assets.
 - l. Must be an aeronautical rated officer (pilot/navigator).
 - m. Other (please specify)
-
-

3. Which of the above do you consider the top five most important?
 1. ___
 2. ___
 3. ___
 4. ___
 5. ___

The answers to the above questions were compared to what is formally stated in the Army and Air Force publications. The various manning sources currently available to perform the ALO duty were compared and contrasted to determine which manning options have these skills and knowledge and who is best qualified to perform the ALO tasks and duty.

Since ALO manning is an issue, the following questions were asked to all individuals to acquire opinions as to the possible manning sources for the ALO duty:

1. Do you believe an ETAC (a noncommissioned officer) can perform the mission of a BALO adequately?
 - a. Yes
 - b. No

2. If the answer to question 1 was no, circle your reason why not.
 - a. Must be an officer to be effective.
 - b. Must be a pilot to be effective.
 - c. ETACs are not qualified to do all the tasks of an ALO.
 - d. Army Officers give more credibility to other officers.
 - e. Other (please specify)

3. Do you believe an ALO needs to be a rated officer?
 - a. Yes
 - b. No

4. If your answer to question 3 was yes, please give a reason.
 - a. Only a rated officer has the knowledge needed for the ALO duty.
 - b. Only a rated officer has the experience needed for the ALO duty.
 - c. The Army expects a rated officer in that position.
 - d. Other (please specify)

5. Do you believe Air-battle managers should be considered for the ALO duty?
 - a. Yes
 - b. No

6. If your answer to question 5 was no, please give a reason.
 - a. They do not have a fighter/bomber background.
 - b. They do not have the close air support experience/knowledge.
 - c. They will take longer to train to perform the duty.
 - d. Other (please identify)

The answers to the above questions will be analyzed to determine the various opinions to the feasibility of the manning sources. This question will determine which individuals the Army officers believe are qualified to perform the ALO duty. It will also determine which individuals the Air Force personnel believes are qualified for the duty.

An ALO career field would not be feasible if it was not receptive to both the Army and the Air Force. In order to obtain opinions on the thesis question, the following questions were asked on each survey:

1. Should the Air Force develop an Air Liaison Officer career field?
 - a. Yes
 - b. No

2. If your answer to question 1 was yes, please circle one or more of your reasons.
 - a. Will solve the ALO manning problem.
 - b. Will provide for continuity in the ALO duty and representation throughout the Air Force.
 - c. Will improve the performance of the ALO duty.
 - d. Other (please specify)

3. If your answer to question 1 was no, please circle one or more of your reasons.
 - a. The current ALO manning and duty is working fine.
 - b. There is no need for continuity in the ALO duty or representation throughout the Air Force.
 - c. There is no need to improve the current ALO duty performance.
 - d. It would be too hard to do.
 - e. Other (please specify)

These questions will identify if there is a perceived need for an ALO career field. It will also identify the reasons why a career field should be considered or why it should not be considered. These answers will also be analyzed by the response of each service.

The question of whether the Army should perform the ALO missions affects the thesis question. This continues to be an issue between the Air Force and Army personnel. Therefore, this was addressed in the following questions:

1. Do you believe the Air Force should transfer the Tactical Air Control mission to the Army and provide assets for training the Army air controllers.
 - a. Yes
 - b. No

2. If your answer to question 1 was yes, please give a reason.
 - a. The Air Force does not accomplish the mission suitably.
 - b. The Air Force does not have the sufficient manning.
 - c. The Army could do this mission better.Other (Please specify)

This question will provide current opinions of the service personnel. The answer to this question on the ALO and Air Force enlisted surveys will report how they perceive the importance of their duty. The Army answers will report how well they perceive the Air Force is conducting this mission.

The survey to ALOs contained questions pertaining to how they chose the ALO duty, if they would volunteer for another ALO duty, and their perception of the ALO duty relating to their career (helped or hurt). They were also asked how the ALO duty ranked compared to other duties performed? These questions will validate the assumption stated in chapter one that the ALO duty is not popular in the Air Force.

The surveys to ALOs and ROMADs contained questions about training. They were asked what are the most important training received, and how they would improve on the ALO duty training. This will give data on the training requirements. The ALOs were asked how long before they felt proficient in their duty. This question will again address the assumptions stated in chapter one that it will usually take 3 to 6 months for an ALO to become proficient in the duty. A question was also asked as to whether they believed the TACP issues were sufficiently addressed at Air Staff and Air Combat Command. The answer to these questions would further support the need for an ALO career field or identify other solutions to the ALO problems.

The survey sent to the Air Force enlisted personnel (ROMADs) asked if they were currently performing the BALO duty and what was the most important training they received to perform that duty. The answer to these questions provided additional feedback of the training requirements for the ALO and BALO duty.

The survey to the Army officers asked how often they worked with their assigned ALO or Air Force enlisted personnel. This answer will be matched with the related question on the ALO and Air Force enlisted survey. They were also asked how much time an ALO or ROMAD should spend with them per week. These answers will determine how well the Air Force is conducting training with the Army. Army officers were asked what were their impressions of ALOs and the ALOs competency. They were asked to list any areas that the Air Force could improve upon for the ALO training. Finally, they were asked if the Air Force was living up to their part of the Air-ground mission. The answer to these questions would provide data that will either support the need for improvement of the ALO duty and the Air Force support of this mission or determine that the Army is satisfied with the performance of the Air Force and the ALOs currently in the duty position.

In addition to the surveys issued, a few interviews were conducted to gather further evidence of opinions pertaining to the thesis question.

Summary

The thesis methodology was to first conduct a literature review to identify ALO duty issues, determine the stated ALO duty requirements, and identify various ALO manning options. Second, administer surveys to acquire opinions from the field from both Army and Air Force personnel to identify the ALO duty problems/issues, ALO duty requirements, and the possible ALO manning solutions. Lastly, compare and contrast the ALO duty requirements to the ALO manning options. By conducting this analysis, the research will determine what manning options

are the best for fulfilling ALO responsibilities. This will also provide evidence to determine if the ALO duty needs to be a rated officer as is the current requirement for the active Air Force. If the duty can be performed by a nonrated officer, then why not develop an ALO career field? The thesis will answer these questions in the next chapter.

CHAPTER 4

ANALYSIS

The foundation of this thesis involves the ALO duty requirements and the accomplishment by the Air Force of the tactical air control mission. ALO duty requirements, as stated in military publications, were researched and then compared to the survey results. Current ALO manning problems and issues affect the quality of service the Air Force provides to the Army in accomplishing the tactical air control mission. Therefore, these issues were analyzed to determine if the Air Force would improve the capability of performing the tactical air control mission by developing an ALO career field.

ALO Problems and Issues

The ALO problems and issues identified consisted of the following. First, there is a persistent problem with manning the ALO duty. As mentioned in the literature review, most of the problem results from the affect of a rated officer shortage in the Air Force. Because of this problem, the Air Force has decided to use Air-battle managers (ABM) for the ALO duty and ETACs for the BALO duty (TACP/ASOC and ALO/BALO Manpower Realignment MSG, July 98) and the Air National Guard is using nonrated officers. The survey data will be analyzed to determine whether these solutions adequately accomplish the tactical air control mission for the Army.

An ETAC is very familiar with the tactical air control mission because that is his duty. To replace the BALO with an ETAC is a logical solution because ETACs often assist the ALO in the performance of the ALO requirements. The only question is whether the Army will accept the ETAC in that position. That is a question asked in the survey which will be addressed later.

The ABM directs and manages air-battle management operations (AFMAN 36-2105, 1997). The literature review indicates that this career field also has manning problems. The idea of making this career field rated was to help with the retention of personnel and create new opportunities for promotions. The ABM, just as any motivated Air Force officer, is capable of performing the ALO duty after receiving additional training. Will the Army accept an ABM in the ALO duty? That question was also asked in the survey and will be addressed later.

The Air National Guard nonrated ALO program has continued to provide the Army National Guard and also augment the Active duty with proficient ALOs since 1991. The program has been proven to work in the Air National Guard but will this program be viable for the active Air Force and will the Army accept a nonrated officer in the ALO duty? These questions will be addressed later in the survey results.

Second, there is a problem in the lack of continuity for the ALO duty. This was mentioned in the literature review from the Knox report. Most ALOs do not perform more than one tour. Therefore, the proficiency they achieved is not employed again. Officer leadership is constantly changing in ASOSs with most commanders rarely having ALO experience. This results in some NCOs (non-commissioned officers) being required to instruct the officers.

The third problem is that most ALOs report to their duty assignment not fully trained to perform the ALO duty. A three-week JFCC course is the only training received prior to reporting. JFCC teaches only general instruction on the tactical air control system. The course is not specifically for ALOs and is attended by all service personnel. The ALO is expected to receive training (OJT) at his duty station and may take three to six months to become proficient in the ALO job.

Fourth, is the fact that TACP staff officers at the headquarters of Air Staff and Air Combat Command sometimes are officers who have not performed the ALO duty and therefore are not familiar with current TACP issues. Once they become familiar with all the issues or

problems, their tour is concluded and a replacement is assigned who again may not be a prior ALO. The same TACP problems are addressed each year at the worldwide ALO conferences.

These problems and issues affect the ALO duty and the accomplishment of the TACP mission. Questions were asked in the surveys pertaining to these issues and will be analyzed. First the ALO duty requirements must be determined before the manning sources can be analyzed to decide who meets the qualifications.

Stated ALO Duty Requirements

The stated ALO duty varies depending on the echelon of assignment. The basic duty at all echelons is to advise the Army commander and staff on the employment of tactical air. The following is a description of ALO tasks.

1. Advise the Army Commander on capabilities and proper employment of USAF assets.

This is the primary duty stated in most military publications. To accomplish this task, an ALO would need knowledge of the variety of Air Force aircraft and their weapons, ordnance, and navigation systems. Some of these systems are LANTIRN (low altitude navigation & targeting infrared for night) system, Pave Penny (laser tracking), FLIR (forward looking infrared), and PAVEWAY (GBU guidance package).

2. Assist the operations officer (G/S-3) and the fire support officer (FSO) with planning the integration of CAS and air interdiction (AI) into the operations scheme of maneuver. To accomplish this task the ALO needs to be familiar with the Army's military decision-making planning process (MDMPP) and have knowledge of Army operations and staff coordination.

3. Direct the control of close air support aircraft. This is a basic task that is the essence of the ALO duty. This process requires certification on the procedure of terminal attack control. Usually this process is accomplished by ETACs at the battalion level although the BALO will be

required to accomplish this task. ALOs at brigade and higher usually are not in a position to accomplish this task.

4. Submit pre-planned air request. This task is the responsibility of the fire support element (FSE). The ALO is to advise (assist if needed) the Army FSE element in this task. A pre-planned request is submitted through the Army fire support channels to the Corps level. Usually, a pre-planned request is submitted 72 hours prior to the time of operation depending on the air tasking order (ATO) cycle. When approved, the pre-planned request will appear on the ATO.

5. Submit immediate air request. This is a basic task that is also the essence of the TACP duty. The Army can only generate an immediate air request through the TACP. The TACP have high frequency radio equipment that is needed to make the request to the ASOC. Immediate air requests are generated for any air support needs that is not already planned on the air tasking order (ATO).

6. Coordinate with fire support on the deconfliction of airspace. This task relates to number three above and is accomplished prior to the execution of a CAS mission. It is the ALOs duty to coordinate with the fire support officer (FSO) to ensure artillery rounds are not flying through the same airspace of the Air Force aircraft.

7. Coordinate with fire support on marking rounds and SEAD operations. This task also relates to number three and six above and is accomplished prior to the execution of a CAS mission. It is the ALOs duty to assist the FSO plan for suppression of enemy air defenses to ensure safe passage for Air Force aircraft. A marking round (usually a smoke or white-phosphorus shell) will enable the pilot to identify the correct target. The ALO or ETAC will describe the target in relation to the marking round (i.e. the target is directly North of the marking round).

8. Provides Air Force input into the A2C2 operations. This task is accomplished by the division and corps ALOs because they are located with the Army A2C2 elements. They will receive input from the brigade and battalion ALOs and also pass information down to them. This task is important to safeguard Air Force assets traveling through Army airspace. Some items that need coordination are minimum risk routes (MRRs) and contact points (CPs).

9. Attend targeting meetings and assist in the targeting process. Knowledge of the targeting process along with knowledge of other fire support assets would enable the ALO to effectively advise what targets are best for Air Force air assets versus other available fire support assets.

10. Operates and maintains the Air Force air request net (AFARN) and the tactical air direction net (TAD). This is a basic task that is required by TACPs at all echelons. The ALO should be familiar with the radio systems but the enlisted personnel (ROMADs) have primary responsibility for operating the radios in the TACP.

11. Command the TACP element. The ALO is responsible for the personnel and equipment of the TACP. At echelons that have more than one ALO, the senior ALO is in command. The Corps ALO has overall responsibility of all TACPs.

12. Pass information to the intelligence officer. The pilots performing the CAS missions will report to the ALO or ETAC as to what they see and what they believe their bomb effects were on the target (BDA- Battle damage assessment). This information is passed on to the intelligence officer. TACP personnel will relay this information up through the TACP chain of command.

The above ALO tasks identified require subject matter expertise in the following areas:

1. Knowledge of aircraft weapons, ordnance, weapon systems and navigation systems.
2. Knowledge of aircraft tactics and employment.
3. Knowledge of the Army targeting process.

4. Knowledge of the Army Military Decision-Making Planning Process (MDMPP).
5. Knowledge of radio systems.
6. Knowledge of enemy air defenses.
7. Knowledge of Army operations.
8. Knowledge of Army Staff coordination.
9. Knowledge of other Fire Support assets.

Data from surveyed questions pertaining to the ALO tasks, skills and knowledge were analyzed to determine what are the most important tasks at each echelon and what are the five most important skills and knowledge needed to perform the duty. This will be used to determine if these skills and knowledge can be acquired through training or if experience is needed.

Survey Results

The surveys asked each group to rank the ALO tasks in order of priority. Another question asked what skills and knowledge are essential to be an ALO and what are the five most important skills. The survey reported the following data noted by type of survey (ALO, ROMAD, and Army Officer).

ALO Tasks

Current ALOs surveyed reported the following results when asked to rank the ALO tasks in order of priority. ALO tasks will differ depending on the Army echelon at which the duty is performed. Therefore, the data is presented by echelon in table 1.

As the data indicates, there are a wide variety of opinions as to priority of tasks that an ALO performs. The only agreement among all levels is the first task of advising the Army commander. The task of assisting the operations officer and FSO in planning the integration of CAS and AI into the Army operations scheme of maneuver was considered second by all lower

echelons (battalion through division) but third by the corps. Since the Corps TACP has the ultimate command responsibility of all TACPs it is understood why this was chosen as second in priority for the corps elements. The ASOC is responsible for directing CAS assets down to the TACPs and therefore their task is listed second by the ASOC. Generally, the higher echelon corps and division indicate more emphasis on the targeting process, and providing A2C2 input, whereas the lower echelons emphasize execution of CAS with deconflicting airspace and fire support coordination.

Table 1. ALOs Rank Order of ALO tasks

TASK	Battalion ALO	Brigade ALO	Division ALO	Corps ALO	ASOC
Advise Army Commander	1	1	1	1	1
Assist in planning process	2	2	2	3	3
Deconflict airspace	3	4	5	5	6
Command TACP	4	3	3	2	9
Coordinate fire support	5	5	8	8	7
Direct CAS	6	10	11	12	2
Provide A2C2 input	7	7	6	4	10
Maintain AFARN and TAD	8	11	10	9	5
Submit pre-planned request	9	12	7	10	8
Assist in targeting process	10	8	4	7	11
Submit immediate request	11	8	9	6	4
Pass information to Intel officer	12	9	12	11	12

Current ROMADs surveyed reported results in table 2 when asked to rank the order of priority of ALO tasks. Again, the data indicates a wide variety of opinions among the ROMADs for rank order of ALO tasks but less variation by each echelon compared to ALOs data. ROMADs agree at all levels on the rank order of the first two tasks. The responsibility of maintaining the radios in the TACP belongs to the ROMADs and therefore they do not see this as a high priority task for the ALO. ETACs perform most of the direct control of CAS not ALOs; therefore, this is consistent with the low ranking of this ALO task at all echelons. As with the

ALOs data, ROMADs at corps level placed more emphasis on targeting. All other tasks were relatively ranked the same for each echelon.

Table 2. ROMADs Rank Order of ALO Tasks

Task	Battalion ALO	Brigade ALO	Division ALO	Corps ALO	ASOC
Advise Army commander	1	1	1	1	1
Assist in planning process	2	2	2	2	2
Deconflict airspace	3	3	3	4	3
Command TACP	4	4	7	6	8
Coordinate fire support	5	7	6	5	4
Assist in targeting process	6	5	4	3	5
Provide A2C2	7	6	5	7	7
Pass information to Intel officer	8	8	8	8	10
Submit pre-planned request	9	11	11	9	6
Direct CAS	10	10	9	10	11
Submit immediate request	11	9	10	12	9
Maintain AFARN and TAD	12	12	12	11	12

Current Army Officers surveyed reported the following results in table 3 when asked to rank the order of priority of ALO tasks.

Table 3. Army Officers Rank Order of ALO Tasks

Task	Battalion ALO	Brigade ALO	Division ALO	Corps ALO
Advise Army Commander	1	2	1	3
Assist in planning process	2	1	2	1
Direct CAS	3	4	9	9
Deconflict airspace	4	3	4	4
Provide A2C2 input	5	7	6	5
Assist in targeting process	6	9	3	2
Submit pre-planned request	7	5	8	6
Submit immediate request	8	8	5	7
Coordinate fire support	9	6	7	8
Maintain AFARN and TAD	10	12	11	10
Command TACP	11	10	12	11
Pass information to Intel officer	12	11	10	12

The Army officer data varied from the ALO and ROMADs with the ranking of the number one priority task. Battalions and divisions ranked advising the Army commander number one whereas brigade and corps ranked assisting the operations officer with planning as number one. Again more emphasis is placed on the targeting process at division and corps level and more emphasis on execution (directing CAS) on the lower levels. The Army officers see maintaining the AFARN and TAD as a low priority along with command of the TACP and passing information to the intelligence officer.

These data suggests a variety of opinions as to the order of importance of tasks performed. Most groups agree the most important task is to advise the Army commander on capabilities and proper employment of USAF assets. A majority of those surveyed states that the second highest priority is to assist the operations officer and/or FSO, plan the integration of CAS and Air interdiction into the operations scheme of maneuver. The echelon of duty will determine the priority of tasks to be performed. At the corps and division level, there is more emphasis on planning and targeting. At brigade and battalion echelons, there is more emphasis on execution of CAS missions. To accomplish the ALO tasks the following skills and knowledge are required and will be analyzed.

Skills and Knowledge

The skills and knowledge required of an ALO to accomplish the above mentioned tasks will determine the qualifications to perform the duty. The survey question asked the groups (ALOs, ROMADs, and Army officers) to select from a list those skills and knowledge they consider essential to be an ALO.

ALOs reported the following results in Table 4. As expected, a majority of ALOs indicated that knowledge of aircraft weapons and their effects along with knowledge of aircraft

tactics and employment are essential to perform the duty. On the other hand, experience in the fighter cockpit doing CAS or as an FAC-A were not listed as essential by most ALOs.

Table 4. ALOs Listing of Essential ALO Skills and Knowledge

	ALO Skills and Knowledge	Percentage
1	Knowledge of aircraft weapons and their effects	95 %
2	Knowledge of aircraft tactics and employment	87 %
3	Knowledge of enemy air defenses	83 %
4	Knowledge of Army operations	73 %
5	Knowledge of other fire support assets	70 %
6	Knowledge of the targeting process	56 %
7	Knowledge of Army staff coordination	51 %
8	Knowledge of the military decision-making planning process	39 %
9	Must be an aeronautical rated officer (pilot/navigator)	28 %
10	Knowledge of radio systems	27 %
11	Experience in the fighter cockpit doing CAS	11 %
12	Experience in the cockpit as an FAC-A	2 %

ROMADs reported the following results in table 5. The ROMADs agree with the ALOs that knowledge of aircraft weapons and their effects was very essential. They also closely match ALOs results regarding the knowledge of Army operations, fire support assets, and the targeting process. While more ROMADs (81 percent) listed knowledge of Army staff coordination as important compared to ALOs (51 percent), ROMADs agree that experience in the cockpit doing CAS or as an FAC-A was not essential to perform the ALO duty.

Army officers reported the following results in table 6. These data indicate Army officers were more concerned with the targeting process as compared to the ALOs and ROMADs and they were rated highly essential for the ALO duty. They expect the ALO to have knowledge of Air Force weapons capabilities, tactics, and also the effects of enemy air defense capabilities. Also, like ALOs and ROMADs, they did not see cockpit experience as essential to perform the ALO duty. Half of the Army responses favored knowledge in the military decision-making planning process compared to only 39 percent of ALOs. The Army placed knowledge of the

targeting process and Army operations higher than knowledge of MDMPP. This indicates that the ALO should be familiar with the MDMPP but should have more knowledge of the targeting process.

Table 5. ROMADs Listing of Essential ALO Skills and Knowledge

	ALO Skills and Knowledge	Percentages
1	Knowledge of aircraft weapons and their effects	92 %
2	Knowledge of Army staff coordination	81 %
3	Knowledge of aircraft tactics and employment	79 %
4	Knowledge of Army operations	77 %
5	Knowledge of enemy air defenses	77 %
6	Knowledge of fire support assets	68 %
7	Knowledge of the targeting process	58 %
8	Knowledge of the military decision-making planning process	55 %
9	Knowledge of the radio systems	32 %
10	Experience in the fighter cockpit doing CAS	28 %
11	Must be an aeronautical rated officer (pilot/navigator)	18 %
12	Experience in the cockpit as an FAC-A	15 %

Table 6. Army Officers Listing of Essential ALO Skills and Knowledge

	ALO Skills and Knowledge	Percentages
1	Knowledge of aircraft weapons and their effects	92 %
2	Knowledge of aircraft tactics and employment	86 %
3	Knowledge of the targeting process	80 %
4	Knowledge of enemy air defenses	70 %
5	Knowledge of Army operations	56 %
6	Knowledge of other fire support assets	53 %
7	Knowledge of the military decision-making planning process	50 %
8	Experience in the fighter cockpit doing CAS	37 %
9	Knowledge of Army staff coordination	35 %
10	Knowledge of radio systems	29 %
11	Experience in the cockpit as an FAC-A	19 %
12	Must be an aeronautical rated officer (pilot/navigator)	14 %

These data suggest that experience is not required but knowledge of the aircraft weapons, their effects, their tactics, and employment are necessary to perform the ALO duty. A rated officer will have knowledge in these subject areas. However, ETACs, ABMs, and nonrated

officers may also receive training that would enable them to understand the weapon systems and their effectiveness. With the exception of the experience, all the other skills and knowledge may be trained.

Each surveyed group was asked to rank the top five most important skills and knowledge. Table 7 compares the results for each group. This data agrees with the above tables with some minor differences. 81 percent of the ROMADs surveyed listed Army staff coordination as essential and 79 percent listed aircraft tactics and employment essential. But when asked to rank the top five, a majority listed tactics and employment second and staff coordination third. The same kind of results appeared for knowledge of enemy air defenses and fire support assets. 77 percent listed enemy air defenses essential and 68 percent listed fire support assets essential but ranked these in the top five in reverse order. The Army officers had a similar difference. When asked to rank the top five they listed knowledge of other fire support assets above knowledge of Army operations even though these were in reverse order in the table above.

Table 7. Comparison by all Groups as to the Top Five Ranking of ALO Skills and Knowledge

Skills & knowledge	ALOs	ROMADs	Army officers
Knowledge of aircraft weapons and their effects	1	1	1
Knowledge of aircraft tactics and employment	2	2	2
Knowledge of enemy air defense weapons	3		4
Knowledge of Army operations	4	4	
Knowledge of other fire support assets	5	5	5
Knowledge of Army staff coordination		3	
Knowledge of the targeting process			3

The table 7 indicates agreement by all groups on the first, second and fifth subjects but disagreement on the third and fourth. As mentioned above, the Army officers believe an ALO needs knowledge of targeting process more than knowledge of Army operations. ROMADs consider Army staff coordination more important than knowledge of enemy air defense weapons.

Table 8 indicates the subject knowledge required and lists the manning sources that have current knowledge of the subject. The table shows that ETACs currently possess the knowledge in five of the seven subjects listed and that the rated officer already has the knowledge in three required subjects listed. The ABM and a nonrated officer would have to learn the knowledge required in the above subjects. This analysis indicates that the ALO skills and knowledge required to perform the ALO tasks could be acquired through an educational process. A structured course (three to four weeks) can teach the required knowledge. The rated officer and ETAC could learn the duty quicker because of their prior subject knowledge. The ABM and nonrated officer would take longer to train (depending upon their background knowledge). The analysis indicates that cockpit experience is not essential to performing the ALO duty. Although, experience does offer a better understanding of the terminal attack control process and also offers more credibility in the performance of the ALO duty.

Table 8. Comparison of Subject Knowledge to Current Manning Options

Subject knowledge	Rated officer	Nonrated officer	ETAC	ABM
Knowledge of aircraft weapons and their effects	X		X	
Knowledge of aircraft tactics and employment	X			
Knowledge of enemy air defense weapons	X		X	X
Knowledge of Army operations			X	
Knowledge of other fire support assets			X	
Knowledge of Army staff coordination			X	
Knowledge of the targeting process				

Manning Options

The perception of performance capability will affect all who perform the ALO duty. There are four manning options currently used by the Air Force. They are: (1) rated officers, (2) ETACs in BALO positions, (3) ABMs for some ALO positions, and (4) Nonrated officers in the Air National Guard. The following data examines the ALO manning options.

Using ETACs as BALOs

The following questions and responses pertained to using ETACs servicing in the BALO duty position. The two questions asked were:

1. Do you believe an ETAC (a noncommissioned officer) can perform the mission of a BALO adequately?
 - a. Yes
 - b. No

2. If the answer to question 1 was no, circle your reason why not.
 - a. Must be an officer to be effective.
 - b. Must be a pilot to be effective.
 - c. ETACs are not qualified to do all the tasks of an ALO.
 - d. Army Officers give more credibility to other officers.

The majority of ALOs (75 percent) surveyed concurred that ETACs can perform as BALOs. Twenty-five percent did not concur that an ETAC can perform as a BALO. They reasoned that an officer carried more credibility than an enlisted person. Table 9 indicates the responses of the 25 percent ALOs who said an ETAC can not perform the mission of a BALO.

Table 9. ALO Reasons Why an ETAC Should Not Perform the BALO Mission

Reason	Percentage
Army officers give more credibility to other officers	16 %
Other reasons with comments	4 %
Combination of reasons with all saying credibility is a reason	3 %
ETACs are not qualified to do all the tasks of an ALO	1 %
Must be an officer to be effective	1 %

Some of the comments listed for other reasons were:

1. "Even if an ETAC has the skills, knowledge and experience, they will always be an outsider. They will not be part of the OPDs (officer professional developments) and other after hours team building functions."

2. "Only certain ETACs with the knowledge and experience would be the best at performing BALO duties. It all depends on the individual."

3. "Debates/discussions on efficacy/efficient application of airpower at all levels are best addressed by an educated and indoctrinated officer."

The majority of ROMADs (82 percent) concurred that ETACs can perform the BALO duty while 16 percent disagreed saying they could not perform the duty. Table 10 indicates the responses for the 16 percent who said the ETAC could not perform the BALO duty. Most of the comments related to the credibility that Army officers give to enlisted personnel.

Table 10. ROMADs Reasons Why an ETAC Should Not Perform the BALO Mission

Reasons	Percentages
Army officers give more credibility to other officers	10 %
Combination of responses with all saying Army officers give more credibility to other officers	4 %
Other reasons with comments	2 %

Some comments were:

1. "Army looks at enlisted people as scum. At a minimum, BALOs should be a warrant officer or the Army will pretty much blow them off."
2. "The Air Force should bring back warrant officers or have nonrated officers as ALOs. I believe that it is necessary to have a higher rank at a TACP in the field to effectively deal with the Army."
3. "Army officers have a very different view of enlisted people, much lower than Air Force officers."

Army officers concurred with the proceeding responses with 70 percent who said yes an ETAC could perform the BALO duty, while 28 percent disagreed. Table 11 indicates the responses of the 28 percent who said an ETAC can not perform the BALO duty. Comments related to experience of ETACs and their integration into the planning process.

Table 11. Army Officers Reasons Why an ETAC Should Not Perform the BALO Mission

Reasons	Percentages
ETACs are not qualified to do all the tasks of an ALO	12 %
Must be a pilot to be effective	6 %
Army officers give more credibility to other officers	5 %
Other reasons with comments	3 %
Must be an officer to be effective	2 %

Some comments were:

1. "I'd question the experience, education, and judgement of the ETAC compared to the ALO."
2. "I've observed extremely competent ETACs, however, there is often a problem integrating into the planning process. They are great executors."
3. "Experience missing. NCOs don't fly. Great at controlling."

These data suggests that all groups agree with the option of using ETACs as BALOs. The perception that Army officers give more credibility to other officers was not validated (only 5 percent of the Army officers surveyed stated this as a problem). The data from the ROMADs show that they are willing and motivated to perform the BALO duty. However, 16 percent of those surveyed did not believe they should do the BALO duty. The majority of the 16 percent believed they would not be considered credible to Army officers.

Nonrated Officers

The following survey questions and data pertain to the option of using nonrated officers in the ALO duty position. The two questions asked were:

1. Do you believe an ALO needs to be a rated officer?
 - a. Yes
 - b. No
2. If your answer to question 1 was yes, please give a reason.
 - a. Only a rated officer has the knowledge needed for the ALO duty.
 - b. Only a rated officer has the experience needed for the ALO duty.
 - c. The Army expects a rated officer in that position.

ALOs (56 percent) concurred that ALOs do not need to be rated officers while 44 percent concurred that ALOs should be rated. Table 12 indicates the responses of the ALOs (44 percent) who said an ALO needs to be a rated officer.

Some of the comments were:

1. "You have to understand what is going on in the cockpit and know how well you can visually acquire points on the ground."
2. "You can teach anyone about weapons effects/planning/etc but if you have no practical experience you will lose credibility."
3. Pertaining to the ASOC duty one comment stated, "rated officers are not needed for ASOC ALO/FIDO duty. Intelligence officers or Communications officers could also be ASOC ALOs."

Table 12. ALO Reasons Why an ALO Should be a Rated Officer

Reasons	Percentages
Only a rated officer has the experience needed for the ALO duty	18 %
Combination of only a rated officer has the knowledge & experience needed for the ALO duty	11 %
Other reasons with comments	7 %
The Army expects a rated officer in that position	4 %
Only a rated officer has the knowledge needed for the ALO duty	4 %

A majority of ROMADs (65 percent) concurred that ALOs do not need to be rated officers while 33 percent concurred that ALOs should be rated. Table 13 indicates the responses of the 33 percent ROMADs who believe an ALO should be a rated officer.

Some comments given for other reasons were:

1. "At brigade and lower, I feel that a knowledgeable ETAC can handle the actual ALO duties. An officer comes in to run interference with Army officers and if you are going to fill that position, a rated officer brings more credibility with the Army."

2. "That's not to say that a B-52 nav or a RC-135 sensor operator knows anything about CAS. ALO should be bomb droppers."

Table 13. ROMADs Reasons Why an ALO Should be a Rated Officer

Reasons	Percentages
Only a rated officer has the experience needed for the ALO duty	9 %
Combination of all three responses	9 %
The Army expects a rated officer in that position	7 %
Other reasons with comments	4 %
Only a rated officer has the knowledge needed for the ALO duty	4 %

A majority (56 percent) of Army officers reported that an ALO needs to be a rated officer while 44 percent reported the ALO does not need to be rated. Table 14 indicates the responses of the 56 percent who said an ALO needs to be a rated officer.

Table 14. Army Officers Reasons Why an ALO Should be a Rated Officer

Reasons	Percentages
Only a rated officer has the experience needed for the ALO duty	30 %
Combination of only a rated officer has the knowledge and experience needed for the ALO duty	7 %
Other reasons with comments	7 %
The Army expects a rated officer in that position	5 %
Only a rated officer has the knowledge needed for the ALO duty	3 %

Some comments were:

1. "In many eyes, it makes them more of a combat type."
2. "Knowledge and experience combined provide a better background for an understanding of synchronizing the effects of combined arms (CAS/AI)."
3. "He has the 'feel' for what is needed and how the pilot has to react. That, in my opinion, comes with experience not book knowledge."

A majority of ALOs and ROMADs state an ALO does not have to be a rated officer while a majority (10 percentage point difference) of Army officers state they concur an ALO must be a rated officer. A majority of those that stated the ALO must be rated agree only a rated officer has the experience needed for the ALO duty. Yet, a majority of Army officers (70 percent) decided that the BALO duty could be performed by an ETAC (a nonrated person). This result could be the result of Army officers working with ETACs and therefore are familiar with their capability whereas they have not worked with a nonrated officer and do not know the quality or capability of these individuals.

Air-battle Managers

The two questions that examine the option of using an ABM in the ALO duty position were:

1. Do you believe Air-battle managers should be considered for the ALO duty?
 - a. Yes
 - b. No

2. If your answer to question 1 was no, please give a reason.
 - a. They do not have a fighter/bomber background.
 - b. They do not have the close air support experience/knowledge.
 - c. They will take longer to train to perform the duty.

A majority of the ALOs (66 percent) concurred that ABMs should be considered for the ALO duty while 33 percent disagreed. Table 15 indicates the responses of the 33 percent that said the ABM should not be considered for the ALO duty.

Table 15. ALOs Reasons Why ABMs Should Not be Considered for the ALO Duty

Reasons	Percentages
They do not have the close air support experience/knowledge	9 %
They do not have the fighter/bomber background	8 %
List all three responses	7 %
List other reasons with comments	7 %
They will take longer to train	2 %

Some comments were:

1. "No air experience in high performance aircraft."
2. "The Army will not take them seriously."

A majority of the ROMADs (51 percent) reported they do not agree the ABMs should be considered for the ALO duty while 41 percent said yes. Eight percent did not respond with a "yes" or "no". They did comment that they were not familiar with the ABM position. Table 16 indicates the responses of the 51 percent who concur ABMs should not be considered for ALO duty.

Some comments were:

1. "Have never had contact with Air-battle managers, so not qualified to answer this question."
2. "They generally don't have the experience on tactics and functions."
3. "If you can prove they have the necessary knowledge and skills, only then consider."

Table 16. ROMADS Reasons Why ABMs Should Not be Considered for the ALO Duty

Reasons	Percentages
They do not have the close air support experience/knowledge	19 %
They will take longer to train to perform the duty	8 %
Listed other reasons with comments	8 %
Listed all three reasons	7 %
Combination of responses	7 %
They do not have the fighter/bomber background	2 %

Fifty three percent of Army officers disagreed while 37 percent indicated ABMs should be considered for the ALO duty. Ten percent did not answer saying they were not familiar with this Air Force officer. Table 17 indicates the responses of the 53 percent who said no.

There were many comments showing unfamiliarity with this type of Air Force Officer. Many surveys had a question mark at this question. Some comments were:

1. "The experience of these officers is technically related and may not prove to be useful in planning and integrating Air Force assets into an Army maneuver plan."
2. "I want a person who knows what is going on in the aircraft."

Table 17. Army Officers Reasons Why ABMs Should Not be Considered for the ALO Duty

Responses	Percentages
They do not have the close air support experience/knowledge	30 %
Listed other reasons with comments	6 %
Listed both they do not have a fighter/bomber background and they do not have the close air support experience/knowledge	5 %
They will take longer to train	4 %
They do not have a fighter/bomber background	2 %
Listed all three reasons	2 %

The ALOs and ROMADs agree that all options are feasible with the ETAC and nonrated receiving more of the percentages. The Army was most receptive to using the ETACs compared to nonrated and ABMs. The data may reflect bias due to unfamiliarity with the capabilities of ABMs or nonrated officers. The most frequent comment from Army officers pertained to having a person who wanted to do the duty, who would be enthusiastic, and willing to work with them.

Develop ALO Career Field

An ALO career field would not be feasible if it was not receptive to both the Army and the Air Force. Therefore, the following three questions were asked.

1. Should the Air Force develop an Air Liaison Officer career field?
 - a. Yes
 - b. No
2. If your answer to question 1 was yes, please circle one or more of your reasons.
 - a. Will solve the ALO manning problem.
 - b. Will provide for continuity in the ALO duty and representation throughout the Air Force.
 - c. Will improve the performance of the ALO duty.

3. If your answer to question 1 was no, please circle one or more of your reasons.
- a. The current ALO manning and duty is working fine.
 - b. There is no need for continuity in the ALO duty or representation throughout the Air Force.
 - c. There is no need to improve the current ALO duty performance.
 - d. It would be too hard to do.

A majority of the ALOs (66 percent) surveyed concurred with the development of an ALO career field while 33 percent disagreed. Table 18 indicates the responses of the 66 percent who favor the development of an ALO career field.

Some additional comments stated were:

1. "Fewer rated officers would leave the Air Force when faced with an ALO tour."
2. "It would provide continuity in leadership to the enlisted 1C4s."
3. "Will keep good ETACs and ROMADs on the job if they get consistent top cover."
4. "There are many nonrated O's out there who would love to do this job, just like combat control officers."
5. "It would provide for a credible proponent for the offensive TACS community that is almost totally lacking currently."

Table 19 indicates the responses of the 33 percent who disagree with development of an ALO career field. Those who stated the Air Force should not develop an ALO career field; a majority 24 percent stated other reasons. Some comments were:

1. "Misses point of problem -- where would they get air experience."
2. "No aviator would want to do this but you really need good fighter/bomber tactics knowledge."
3. "The second word of ALO is liaison. To properly fulfil liaison duties, the officer must fully understand and appreciate the AF (Air Force) concept of operations and should come from AF units into liaison and return to AF units."

4. "ACC won't care any more about a career ALO than they do with today's temporary ALO. In fact, then ALOs would be like today's ETACs. No one in the Air Force knows they exist."
5. "How do you train or educate experience and understanding of someone with 6-10 years ops [operations] experience. It is a great continuity thing to have 1 or 2 ALOs and 1 or 2 career field ALO (nonrated). We need a mix."

Table 18. ALOs Reasons for the Development of an ALO Career Field

Reasons	Percentages
Listed all three reasons	25 %
Will provide continuity in the ALO duty and representation throughout the Air Force	15 %
Listed both: will provide continuity in the ALO duty and representation and also will improve the performance of the ALO duty	15 %
Listed both: will solve ALO manning problem and will provide continuity in the ALO duty and representation throughout the Air Force	7 %
Listed both will solve ALO manning problem and improve the ALO duty	2 %
Listed other reasons with comments	2 %

Table 19. ALOs Reasons Why an ALO Career Field Should Not be Developed

Reasons	Percentages
Listed other reasons with comments	24 %
It would be too hard to do	5 %
The current ALO manning and duty is working fine	2 %
There is no need for continuity in the ALO duty or representation throughout the Air Force	1 %
There is no need to improve the current ALO duty performance	1 %

Less than 10 percent gave one of the listed choices to the question.

A majority of ROMADs (87 percent) reported they concurred with the development of an ALO career field while 10 percent disagreed. Table 20 indicates the responses of the 87 percent that agree with development of an ALO career field.

Table 20. ROMAD Reasons for the Development of an ALO Career Field.

Reasons	Percentages
Listed all three reasons	41 %
Listed both: will provide for continuity in the ALO duty and representation throughout the Air Force and will improve the performance of the ALO duty	19 %
Will improve the continuity in the ALO duty and representation throughout the Air Force	13 %
Combination of reasons all listing continuity and representation reasons	4 %
Listed both will solve the ALO manning problem and will provide for continuity in the ALO duty and representation throughout the Air Force	3 %
Will solve the ALO manning problem	3 %
Listed other reasons with comments	3 %
Will improve the performance of the ALO duty	1 %

Some comments in favor of developing an ALO career field were:

1. "We will have motivated, committed, knowledgeable ALOs instead of what we have now."
2. "Will also lead to increase 1C4 (ROMAD) morale and retention. One of the main problems for the 1C4 AFSC has been the ALO transient management that has existed for years."
3. "It would give 1C4's an educative incentive and utilize their experience. Some love the job and don't want a commission to a desk job."
4. "Continuity is the key. If it's a regular job, we won't be doomed to resolve the same problems every two years. They will want to be there."

5. "We keep throwing band-aids on a sucking chest wound. Why is CCT capable of manning a 60 officer career field, yet it is viewed as impractical in the ALO/TACP world?"
6. "Will be better recognition for 1C4 career field. Make like CCT. I believe they should combine the career field (CCT & ALO)."

Table 21 indicates the responses of the 10 percent who disagree with the development of an ALO career field.

Table 21. ROMADs Reasons Why an ALO Career Field Should Not be Developed

Reasons	Percentages
Listed other reasons with comments	4 %
The current ALO manning and duty is working fine	3 %
There is no need for continuity in the ALO duty or representation throughout the Air Force	1 %
There is no need to improve the current ALO duty performance	1 %
It would be too hard to do	1 %

The following were some comments for not developing an ALO career field:

1. "Individual units should establish their own local ALO training programs to suit the needs of the assigned units mission. This program should be tested and evaluated periodically similar to 1C4 career field."
2. "They will burn out just like the enlisted. We need just a little of that flying type attitude."
3. "I think the person would lose interest in his job quickly."
4. "ETACs can perform everything a Brigade ALO does."
5. "Still need rated officers--mainly flying pilots. They understand the process better."
6. "I don't think the Air Force officer promotion system can support another career field. There are enough problems in general with officer promotions and retention."

This data suggest that most ROMADs (1C4's) see the creation of an ALO career field an improvement to the current ALO duty. It is interesting that some have compared this option to the Combat Control Team (CCT) career field. This option was mentioned in the Knox report (literature review). Also noted was the view that ROMADs could pursue a college degree and receive a commission and still continue in a job they enjoy and have the knowledge to accomplish. Most of the nonrated ALOs in the ANG ALO program were prior ETACs.

Pertaining to the response concerning improving TACP representation throughout the Air Force, ALOs and ROMADs were asked if they believed that TACP issues were sufficiently addressed at Air Staff and Air Combat Command (ACC). Almost all reported that TACP issues were not sufficiently addressed. ALO results were 95 percent no and 3 percent yes, as compared to ROMADs results which were 83 percent no and 10 percent yes. This data suggests ALOs and ROMADs see an ALO career field as a method of improving this problem. This supports the above results in favor of an ALO career field.

A majority of the Army officer's (51 percent) concurred with the development of an ALO career field while 48 percent disagreed. Table 22 indicates the responses of the 51 percent who agree with the development of a career field.

Some of the comments in favor of developing an ALO career field were:

1. "Yes if you are having problems manning ALO positions a with rated officers this would/could be a fix, but you would still need some pilots."
2. "Will provide a base of trained officers."
3. "Most ALOs are pilots/navs who have no interest in being in a non-flight billet."
4. "Most pilots don't want to be ALOs -- they want to be in flying billets."
5. "Just wanting to be an ALO will make an improvement."
6. "Will create a professional cadre of ALOs -- enthusiastic in their duties and skilled in their crafts (like the ETACs are now)."

7. "If assigned to an Army unit like they are in the Ranger Regiments, they better understand the commander's intent and have a much better relationship with the tactical operations center."

Table 22. Army Officer's Reasons for the Development of an ALO Career Field

Reasons	Percentages
Listed all three reasons	15 %
Combination of all responses	13 %
Will provide continuity in the ALO duty and representation throughout the Air Force	10 %
Will solve the ALO manning problem	6 %
Will improve the performance of the ALO duty	5 %
List other reasons with comments	2 %

Table 23 indicates the responses of the 48 percent who disagree with the need for an ALO career field. Some of the comments for not developing an ALO career field were:

1. "Would not solve the lack of work ethic and participation in planning and orders."
2. "Practical experience in close air support would be lost. Great pilots also make great ALOs. Best ALOs I have worked with are by norm pilots also."
3. "A quality ALO draws upon the variety of experience he has had to perform his job well."
4. "Only the experience gained as a pilot gives them the necessary tools to perform as ALOs."
5. "The ALO program needs officers who come out of the cockpit with current experience. An ALO career field would not give us this."
6. "It circulates USAF people through a variety of experiences."
7. "We have the right type of people well trained but just not enough."

This data suggest that the majority of Army officers would like to see a dedicated Air Force officer who is enthusiastic and willing to work with the staff in the planning process. Some

have compared the excellent ETAC performance to the development of a nonrated ALO or an ALO career field. Those Army officers not in favor of development of an ALO career field state that the experience of a rated officer is critical to the planning process. However, they assumed that this career field would preclude rated officers, which is not necessarily true. All data suggests that there is a perceived need for an ALO career field and that all groups are agreeable to the establishment of an ALO career field.

Table 23. Army Officer's Reasons Why an ALO Career Field Should Not be Developed

Reasons	Percentages
Listed other reasons with comments	19 %
The current ALO manning and duty is working fine	14 %
There is no need to improve the current ALO duty performance	5 %
Combination of all reasons	4 %
There is no need for continuity in the ALO duty or representation throughout the Air Force	2 %

Transfer Tactical Air Control Mission To Army?

The issue of whether the Army should perform the ALO mission has an impact on the thesis question. Therefore the following two questions were asked:

1. Do you believe the Air Force should transfer the Tactical Air Control mission to the Army and provide assets for training the Army air controllers.
 - a. Yes
 - b. No

2. If your answer to question 1 was yes, please give a reason.
 - a. The Air Force does not accomplish the mission suitably.
 - b. The Air Force does not have the sufficient manning.
 - c. The Army could do this mission better.
 - d. Other (please specify)

The ALOs surveyed reported: 75 percent no and 22 percent yes. Table 24 indicates the responses of the 22 percent that agree the Air Force should transfer the TAC mission to the Army.

Some comments were:

1. "Yes, if we continue down this road (with current problems)"
2. "Yes, if we allow non aviators to perform these duties."- "We make far too much about Air Force control of bombs on target. Let the Army do the control – Air Force provides the planes. Division/Corps ALO and ASOC required to ensure pilot safety."

Table 24. ALO Reasons the Air Force Should Transfer TAC Mission to the Army

Reasons	Percentages
Listed other reasons with comments	10 %
The Air Force does not have the sufficient manning	8 %
The Army could do this mission better	2 %
Both the Air Force does not have the sufficient manning and the Army could do this mission better	1 %
The Air Force does not accomplish the mission suitably	1 %

ROMADs surveyed reported: 79 percent no and 18 percent yes. Table 25 indicates the response of the 18 percent that agree the Air Force should transfer the TAC mission to the Army.

Table 25. ROMADs Reasons the Air Force Should Transfer the TAC Mission to the Army

Reasons	Percentages
Listed other reasons with comments	11 %
The Army could do this mission better	4 %
The Air Force does not have the sufficient manning	2 %
The Air Force does not accomplish the mission suitably	1 %

Some comments and reasons were:

1. "CAS is not a priority for the Air Force. No money, no support, no understanding."
2. "CAS is the red haired bastard step-child of the Air Force and a forgotten entity. The Air Force doesn't want the mission or we wouldn't have the problems we have now."

Both ALOs and ROMADs agree that the Air Force should not transfer the TAC mission to the Army. The minority that said the missions should be transferred made comments relating to the current problems in manning and the perception of importance the Air Force is giving to this mission. This analysis indicates that current ALO/TACP problems and issues affect the morale of current TACP members and contribute to ideas of handing the mission over to the Army.

The survey question for the Army officers was stated differently.

1. Do you believe the Army should develop a Tactical Air Control career field (ALO and ETACs) with the Air Force providing assets to assist in the training of the Army air controllers?
 - a. Yes
 - b. No

Army officers surveyed reported: 49 percent no and 48 percent yes. Table 26 indicates the responses of the 48 percent who believe the Army should develop a TAC career field.

Some comments were:

1. "It would ease the staff integration and Army operations knowledge issues and give better understanding of Army requirements."
2. "We need Air Force representation at battalion and higher. However, Army fire support teams should be allowed to control the execution if communication assets were available."

Table 26. Army Officer's Reasons Why the Army Should Develop a TAC Career Field

Reasons	Percentages
Listed other reasons with comments	18 %
The Air Force does not have the sufficient manning	10 %
The Army could do this mission better	8 %
The Air Force does not accomplish the mission suitably	6 %
Both the AF does not accomplish the mission suitably and the Army could do this mission better	3 %
Combination of all three reasons	3 %

The Army response to this question is very interesting from the point of view that opinions were nearly split 50/50. This can be analyzed to mean that nearly 50 percent of the Army officers are not satisfied with how the Air Force is conducting the tactical air control mission. When Army officers were asked if the USAF was living up to its end of the air-ground mission, the response was 49 percent yes and 48 percent no. This was identical to the results of the question concerning the Army developing the tactical air control mission. This data clearly suggest that Air Force leaders need to consider improvements to the tactical air control mission.

Army officers believe that Army fire support teams should be able to control Air Force assets. Currently, only trained Air Force terminal air controllers (ALOs and ETACs) are allowed to control Air Force assets. Other personnel may control in emergency situations (called emergency CAS). Army special forces personnel are trained on the procedure to control Air Force assets but they usually have an Air Force ETAC with them to assist in the procedure. There were many comments by Army officers stating that Army fire support personnel should be trained to control CAS.

How often the Air Force ALO works with their Army staff has a direct impact on the perception of the ALO duty by the Army personnel. The survey asked ALOs and ROMADs how often they see their Army unit staff members. Table 27 indicates the results and is compared to the responses of Army officers who were asked how often they see their assigned ALO and ETAC.

The low percentages for daily meetings indicate a need for some TACP personnel to work more routinely with their Army staff members. The ALOs reported that only 53 percent see their Army staff either daily or weekly. This data reflects upon the perception of the Army officers towards the ALOs work ethic. A current ALO commented on how lack of continuity in the ASOSs has resulted in less time devoted to the Army. His comment was, "Close work with

the Army is essential to be a good ALO. When you are constantly working issues within the squadron, it's harder to support your primary customer – the Army.”

Table 27. Amount of Time ALOs, ETACs, and Army Staff Work Together Per Week

	ALOs (sees Army staff)	ROMADs (sees Army staff)	Army (sees ALOs)	Army (sees ETACs)
Daily	17 %	7 %	0 %	0 %
Weekly	37 %	23 %	16 %	5 %
During exercises	32 %	56 %	50 %	60 %
Other	14 %	11 %	33 %	30 %

Army officers were asked: How much time should your ALO spend with you and/or your staff per week? Table 28 indicates the results.

Table 28. How Much Time ALOs Should Spend With Army Officers and Staffs Per Week

Responses	Percentages
From 1 to 3 hours	42 %
Less than an hour	20 %
More than 6 hours	19 %
3 to 6 hours	18 %

This data relates to the previous data. There is a need for ALOs to routinely work with their Army staff. This builds on a team concept and makes the ALO part of the staff and not guest help. The ALO needs to understand the units SOP (standard operating procedures) and personalities of the staff. Routinely working with the staff, not just during exercises, is the only way this can be accomplished. This is a weakness in the current Air Force BALO program where BALOs only work with their aligned Army unit on a TDY basis for exercises or deployments.

Army officers were asked if they felt their ALO is an integral part of their unit or merely “guest help” that perform a specific function? A majority (71 percent) said they were more like guest help and only 27 percent said they were an integral part. These data indicate a need for improvement of the ALO duty and the Air Force support of this mission.

Assumptions

One assumption was that the ALO duty was not a popular duty assignment. The following results support this assumption. Table 29 indicates the results when current ALOs were asked why they became an ALO.

Table 29. Why ALOs became ALOs

Responses	Percentages
Non volunteered into position	34 %
Listed other reasons	23 %
ALO duty was the only job available	17 %
Combination of responses	8 %
Volunteered so that I would receive a better follow-on duty	6 %
Wanted to perform the ALO duty	5 %
The ALO duty looked interesting	4 %
Volunteered so that I would receive a better aircraft	2 %
Wanted to work with and learn more about the Army	1 %

Only 10 percent stated either they wanted to perform the ALO duty, the duty looked interesting or they wanted to work with the Army. The Majority were non-volunteered into the position. Table 30 indicates the responses when current ALOs were asked what was their perception of the ALO tour.

Table 30. ALOs perception of their ALO tour

Responses	Percentages
Hurt my career	37 %
No perception	34 %
Helped my career	28 %

Less than 30 percent said it helped their career. More believed that it hurt their career.

This says a lot about the ALO duty. How will this mission improve if the perception of the duty is so bad?

ALOs were asked to rate their ALO tour among all past assignment. Table 31 indicates the results.

Table 31. ALO tour ranking versus other duty assignments

Responses	Percentages
Bottom	33 %
Near bottom	20 %
Middle	24 %
Near top	17 %
Top	5 %

A majority (53 percent) states that the ALO tour was at the bottom. This again indicates a problem with this duty. This indicates the ALO tour was not enjoyable or rewarding for most ALOs. This will have an effect on the attitude of ALO replacements.

Another assumption was that ALOs normally would not volunteer for another ALO tour. When ALOs were asked if they would volunteer for another ALO tour later in your career the response was 68 percent No and 29 percent Yes. Table 32 indicates the responses of the 68 percent who would not volunteer for another ALO tour.

Most of the other reasons listed referred to retirement. Some comments were:

1. "Getting close to retirement, don't really want to do it again."

2. "I am retiring."
3. "At 20 years now – not interested at this time."

This again validates the assumption that a majority of rated officers will not volunteer for another ALO tour and therefore this contributes to the problem of no continuity in the ALO duty.

An assumption was that it would take 3 to 6 months to become proficient in the ALO duty. Table 33 indicates responses to the question how long did it take to become proficient in performing the ALO duty?

As table 33 indicates, a majority of ALOs (58 percent) takes from six months to one year to become proficient in the ALO duty. This supports the problem statement that most ALOs report to the ALO duty not fully trained.

Table 32. ALOs reasons why they would not volunteer for another ALO tour

Responses	Percentages
Would rather perform a flying duty	18 %
Listed other reasons	16 %
Would rather perform a different nonflying duty	14 %
Combination of responses	10 %
I already spent my time in the barrel	8 %
I need flying tours for career progression	2 %

Table 33. How long it takes an ALO to become proficient in the ALO duty

Responses	Percentages
6 months	34 %
2 to 3 months	27 %
6 to 12 months	24 %
12 or more months	7 %
Immediately	5 %

ALO Training

A supporting question pertains to the training of a newly assigned ALO. Does a newly assigned ALO arrive at his duty station with the necessary training to perform the job or is it “on the job training”? The survey asked current ALOs: What was the most important training you received to perform your duty as an ALO? Table 34 indicates the results.

These data again suggest that most ALOs report to their assignment not fully trained to perform the ALO duty. Nearly 70 percent reported that the most important training was learned on the job. Additional support for this is the above data that said nearly 65 percent of the current ALOs stated it takes them six or more months to become proficient in the duty. This is substantial evidence that suggests that the Air Force needs to improve the preparation of ALOs before they arrive at their duty assignment. This also supported evidence that an ALO career field would be beneficial in solving this deficiency.

Table 34. Most Important Training ALOs Received to Perform their Duty

Responses	Percentages
On the job training (OJT)	71 %
Listed other responses	14 %
Joint firepower control course (JFCC)	12 %
Both JFCC and OJT	3 %
Undergraduate pilot training (UPT)	0 %

A majority of ALOs (82 percent) concurs that the Joint Firepower Control Course should be improved for specific ALO orientation while 15 percent disagreed. This survey question further validates that the current ALOs were not fully satisfied with the current course that is required for all ALOs prior to assignment. This analysis suggests that the Air Force needs to either improve the JFCC course or create another course specifically for ALOs.

ROMADs who are performing the BALO duty were asked what was the most important training they received to perform their duty. Table 35 indicates the results.

Table 35. Most Important Training ETACs Received to Perform the BALO Duty

Responses	Percentages
On the job training (OJT)	54 %
Other responses with comments	19 %
Joint Firepower Control Course (JFCC)	7 %
Terminal Attack Control (TAC) training and certification	7 %
Combination of OJT, TAC, and JFCC	4 %
Combination of OJT and JFCC	4 %
Combination of JFCC and TAC	4 %

The responses indicate that ETACs (similar to data from ALOs) are learning the BALO duty on the job. There appears to be a need for a structured enlisted BALO (E-BALO) course if the Air Force continues to man the BALO position with ETACs. A majority (76 percent) of ROMADs reported they believed the JFCC course should be improved for specific ALO/BALO orientation while 18 percent disagreed. This data along with the above responses indicates that ETACs/ROMADs would benefit from a specific enlisted BALO (E-BALO) course.

The Army officers were asked to list areas the Air Force could improve on in the ALO training. Table 36 indicates the responses. This data indicates that ALOs need to be more involved in the Army's planning process and work more frequently with the Army staff.

Army officers were asked about their general impressions of ALO competency. Table 37 indicates the results. Army officers were also asked about their general impressions of ALOs and table 38 indicates these results. This data suggest the majority of Army officers view current ALOs as competent and qualified individuals. However, 22 percent indicated a deficiency in ALO training.

Table 36. ALO Training Areas the Army Officers Lists as Needing Improvement

Responses	Percentages
Integration into the planning process	41 %
Combination of integration into planning process and staff operations	22 %
Combination of integration into planning, staff operations, and execution of CAS mission	10 %
Execution of CAS mission	8 %
Combination of integration into planning and field training (site set-up, camouflage)	4 %
Combination of integration into planning, staff operations, and field training (site set-up, camouflage)	3 %
Staff operations	2 %

The data pertaining to ALO training indicates that a majority of ALO (and E-BALO) training is accomplished on the job. It is the opinions of most ALOs and ROMADs that JFCC needs to be improved for specific ALO/BALO training. The Army officers indicate a satisfaction with the competency and quality of current ALOs although they indicated a need to improve the integration of ALOs with the Army staff in the planning process.

Table 37. Army Officers Impressions of ALO Competency

Responses	Percentages
Meets standards and require little additional training	39 %
Well trained and knowledgeable	35 %
Notable deficiencies in training requiring much training	18 %
Clueless about their mission and yours	4 %

Table 38. Army Officers General Impressions of ALOs

Responses	Percentages
Competent officers	46 %
Quality officers	36 %
Generally top notch individuals	9 %
Barely competent officers	7 %
Generally below average	1 %

Summary

All Army and Air Force manuals state that the most important task for an ALO is to advise the Army commander on capabilities and proper employment of USAF assets. The survey results also support this. The various other tasks for an ALO will vary depending on the echelon the ALO is working. Battalions and brigades have more emphasis on the task of CAS execution compared to division and corps that emphasize more future planning and targeting tasks. The skills and knowledge needed to perform the ALO tasks are all learnable skills. The two most important are: (1) Knowledge of aircraft weapons and their effects. (2) Knowledge of aircraft tactics and employment. Rated officers (with fighter/bomber experience) possess this knowledge already. ETACs have knowledge of aircraft weapons and their effects but would need to learn aircraft tactics and employment and the targeting process. Nonrated officers and ABMs would have to learn most of the knowledge and skills required. All required knowledge could be taught in a three or four week time period during a structured course. The survey data indicated that experience in a cockpit doing the CAS or FAC-A mission was not required to perform the ALO duty although it does give the rated officer more credibility with the Army officers.

The various ALO manning options were analyzed and it was determined that all options are feasible. The Army heavily favored the use of ETACs as did the ALOs and ROMADs. A majority of ALOs and ROMADs agree that an ALO does not need to be rated but a majority of Army officers disagreed. Current ALOs favored the use of ABMs while a majority of ROMADs and Army officers did not believe they should be considered for the ALO duty although unfamiliarity of this Air Force specialty may have influenced this data.

Most ALOs and ROMADs do not believe the Air Force should transfer the TAC mission to the Army while close to 50 percent of Army officers believe the Army should develop this mission. This response is an indication of the Army's perception of Air Force performance of the TAC mission.

All assumptions stated in chapter one were supported by survey responses.

1. The ALO duty is not a popular duty assignment for Air Force rated officers.
2. ALOs normally will not volunteer for another ALO tour.
3. It will take an ALO three to six months to become proficient in the duty.
4. An ALO does not have to be a rated officer.

The analysis indicates that modifying the JFCC course or creating a specific ALO/BALO course could enhance ALO/BALO training. The current ALO training is heavily dependent on OJT at their assigned duty station. This lack of initial proficiency by newly assigned ALOs affects the general impressions of ALOs by the Army officers. The data indicated that Army officers were satisfied with the competency and quality of ALOs but indicated there was a need to improve the ALO integration with the Army staff.

The development of an ALO career field was heavily favored by most ALOs and ROMADs and marginally by Army officers. Most comments from Army officers in favor of the ALO career field noted it would provide the benefit of having an ALO who wanted to work with the Army staff and would be enthusiastic in their duties. Most comments for not developing an ALO career field expressed a belief that rated experience provided an additional benefit in the planning process. All groups view the ALO career field as an improvement to the continuity of the ALO duty and representation throughout the Air Force.

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

Thesis Question

The thesis sought to answer the following question. Should the U.S. Air Force develop an Air Liaison Officer career field?

Conclusions

To answer the thesis question, the following supporting questions required answering.

Concerning the ALO duties:

1. What is the job description (tasks), by echelon for the ALO duty?

The tasks of an ALO were the same for each echelon of assignment. The priority of the task changed at each level. The higher echelons (Corps and division) involved more future planning operations. Therefore, tasks that involved the targeting process and planning had a higher priority. At the battalion and brigade, more emphasis is on execution. Therefore, control and coordination for airspace and fire support tasks were higher in priority.

2. What are the skills and knowledge needed to perform the ALO duty?

The primary skill is desire, good attitude, and enthusiasm for the duty. Many Army officers and ROMADs made a comment about this requirement in the surveys. The thesis suggest that there is no skill or knowledge that is required that cannot be trained in a short period of time. Survey analysis indicated that rated officers and ETACs possess more knowledge in key subject areas than ABMs and nonrated officers. It is beneficial to have cockpit experience performing CAS but this can be acquired, to some degree, by tactical rides in F16B's or trainer aircraft.

For questions related to ALO qualifications:

1. Who in the Air Force are qualified to perform the ALO duty?

Anyone who is willing to work in the field with the Army and be enthusiastic in the performance of the duty can be qualified with the proper amount of training. This training could be acquired in six to nine months.

2. Does the ALO need to be a rated officer?

The research indicates that an ALO does not need to be a rated officer. A rated officer offers the additional benefit of actual experience but a nonrated officer can perform the same tasks required for an ALO. The Air National Guard nonrated ALO program is evidence to support this analysis.

3. Is the Air Force meeting the Army requirements of providing a qualified ALO?

Yes and No. All current ALOs are very qualified individuals. The problem is the train up time for newly assigned ALOs. In that respect, the Air Force is not meeting the requirement of providing a qualified ALO. Current ALOs attend JFCC prior to their ALO assignment as their only ALO training. Once they report to the ASOS, they learn the duty on the job. The research indicates the first three to six months of duty; most ALOs are not fully qualified.

For questions related to training:

1. Does a newly assigned ALO arrive at his duty station with the necessary training to perform the job or is it on-the-job training?

As stated in the previous question, research reports that most ALOs report without the necessary training.

2. How long does it take an ALO to become proficient in the duty assignment?

Of the current ALOs surveyed, 34 percent stated it took them six months to become proficient in their duty, 27 percent said it took two - three months, 24 percent said it took six - twelve months, 7 percent took twelve or more. Therefore, 65 percent said it took six or more months to become proficient.

The supporting questions indicate that a development of an ALO career field would be beneficial to the United States Air Force. It would provide a pool of dedicated and enthusiastic officers who want to perform the duty thereby eliminating the problem of manning shortfalls. The ALO tasks, skills, and knowledge needed to perform the duty can be trained in a six to nine month period. After this initial training, the Air Force would have nineteen or more years of service available from these individuals. The best quality for an ALO to have is the desire and attitude of wanting to perform the duty. An ALO does not need to be a rated officer. A rated officer does provide cockpit experience and will still be needed in the higher echelons to augment with their technical expertise. A mix of rated and nonrated officers would be beneficial to the career field. An ALO career field would provide continuity that is missing with the current system of two years and out. A career ALO would report to his next assignment already trained. Additionally, a career ALO would provide continuity in leadership positions at the ASOSs. They would already know the administrative process and requirements of the ASOS and would not have to rely on the enlisted personnel helping them through the process. A career ALO would be familiar with current issues and problems and follow through on solving them. Additionally, they would be familiar with equipment problems in the career field. Air Staff and ACC staff TACP action officers could be manned by a career ALO who has a vested interest in the current problems and familiar with background information that may help expedite solutions.

The research indicates there is a need for improvement in the current ALO duty. A career ALO would provide a means of improving the continuity of the duty and resolve the constant manning problems. The research supports the need to develop an ALO career field.

Recommendations

The thesis recommends that the Air Force reconsider the development of an ALO career field. It appears that the decision made by Air staff on Col Knox's ALO career Idea package was

not given the proper research and was hastily made to meet a suspense date. As the survey data indicated, there is a majority of current ALOs, ROMADs, and Army leadership who agree that an ALO career field is needed and it would improve the performance of the ALO duty.

The thesis recommends that the Air Force develop an ALO career field modeled after the Air National Guard program. This career field would include both rated and nonrated officers. The only requirement is the desire and attitude to perform the ALO duty. The ALO career could be offered to highly qualified ETACs who would like to pursue a commission. Additionally, other current nonrated officers (security police, intelligence, communication, etc.) who are willing to transfer into the ALO career field would also have that option. The manning tables could be revised to include first and second lieutenants at supporting positions at brigade or division. This would provide them the exposure and experience they need to perform duties at battalion level as a first lieutenant or captain. An ALO technical school could be developed at the Air Ground Operations School (AGOS) Nellis Air Force Base, Nevada. This course could be taught in a three to four weeks time period. Follow-up (OJT) training could be accomplished at the ALOs assigned ASOS unit. This training would involve terminal attack control and working Army exercises with other qualified ALOs to acquire experience. The nonrated ALO candidates training can be improved by providing tactical rides in the backseat of an F-16B or other trainer aircraft. This would provide useful experience that is often criticized as a weakness of the nonrated ALO.

After one year of initial training and OJT experience, the Air Force will have a very qualified and devoted ALO to continue to perform the tactical air control mission for the next nineteen years. The career ALO program has been working for the Air National Guard (ANG) for the past eight years. It has developed a professional ALO.

Currently there are approximately 215 ALO duty positions in the Air Force (Sanders 1999). There are additionally 96 BALO positions in the active force (ALO Worldwide

conference, 1999) and 60 ALOs in the ANG ("ALO Worldwide conference", 1996). The billets range from Captain to Colonel (Corps ALO). Lieutenants are assigned to some BALO positions. Therefore, there is adequate career progression. Duty positions would not be limited to those in the ASOS units. Air Staff and ACC staff could be billeted with career ALOs who actually have performed the duty and have a vested interest in the issues and problem areas. The acquisition field could benefit by having a career ALO who is familiar with current equipment of the TACP and shortfalls that need to be corrected.

The thesis recommends that a rated pilot with close air support experience should be assigned to some fighter liaison officer (FLO) positions. This will provide the TACPs an inflow of current operational flying expertise and also an outflow of current Army tactics, techniques, and procedures back to the Air Force flying community. This was one of the reasons listed by Air Force staff in the disapproval of the ALO career suggestion.

If the active Air Force does not develop an ALO career field, the thesis recommends the ALO duty could be improved by the development of an ALO specific course (the same as the ALO technical course described earlier for the ALO career field). The survey results suggest that ALO training needs to be improved. The research showed there are many ALOs that are not familiar with their duties at the start of their tour. An ALO specific course could train rated officers, nonrated ANG officers, ABMs, and ETACs on the required subjects to perform the ALO duty. The length of the course could be tailored to the personnel being trained. Therefore, some rated officers (depending on their background) and ETACs would not have to receive all instructions. The course could be instructed in a three to four week time period. This course would be required in place of the JFCC course. It would also be beneficial for the course to include tactical rides in the F-16B for those individuals not fighter/bomber qualified. This would provide the additional experience that would be beneficial to the BALO duty performance.

Areas for Further Research

An area that could be researched further is the consolidation of the ALO duty with the Air Force CCT career field. This was a suggestion made by Lt Col Knox in his suggestion package on creating an ALO career field. The advantages Knox stated would be the enlarging of the officer base of CCTs and increasing assignment opportunities for that AFSC. There are some similarities between the duties that make this option practical.

Another area for further research would be the possibility of the Army taking the mission of tactical air control and having the Air Force provide the assets for the training. The question of why Army fire support team personnel are only allowed to control Air Force assets in emergency situations could be researched. The survey results indicated that 50 percent of Army officers believe the Army could do this mission while a majority of Air Force ALOs and ROMADs believe the Air Force should continue with the mission.

The feasibility of the ALO career field by Air Force personnel center requirements was not researched in this thesis. This may also be an area for further research. There may be cost factors that make this idea impractical. Although, the cost of a rated officer performing this duty is more than the cost of a nonrated officer it can be assumed the cost would favor the ALO career field. The Air Ground Operations School conducts the Joint Firepower Control Course and could reasonably incorporate an ALO course using their same instructors and some of the same current lesson plans. Another possibility is having the ANG conduct the training school at designated times every year. This would be a cost saving factor to the active force and employ the experience of the ANG ALOs.

Summary

The ALO duty is a demanding and important position. Air Force assets can provide massive firepower for the Army Commanders at a decisive time and place if they are incorporated correctly. Experience is often the best teacher. Having an ALO with only a two-year tour does not give much time to gain the experience that could provide the Army commanders with great ideas on the employment of Air assets. This thesis has identified that one of the best qualities of an ALO is the attitude of wanting to do the duty and to help the Army with the employment of Air Force assets. An ALO career field would create a source of professional ALOs with this attitude. It would provide continuity in the TACP community and provide better leadership for the enlisted Tactical Air Control Specialist in the ASOS units. An ALO career field will improve support for the Army and also solve most of the current problems faced by the Air Force with ALO manning. There is no legitimate reason not to develop an ALO career field. Considering a vision of the future *Air Force Basic Doctrine 1* stated:

Tomorrow a new set of conditions and requirements will prevail. In fact, new conditions and environments are already emerging. The best hedge is an institutional commitment to learn from experience and to exploit relevant ideas and new technologies so we may be the masters of our future. (Air Force Basic Doctrine 1997, 74).

The Air Force should learn from the past problems with the ALO duty and exploit the idea of creating an ALO career field. Only then will we have Air Force officers that have the experience to master the tactical air control mission.

APPENDIX A

SURVEY FOR AIR LIAISON OFFICERS

This survey concerns the Air Liaison Officer (ALO) duty. It was developed to receive opinions from current ALOs to help improve the ALO duty assignment and training. It also addresses the ALO manning problem and the possible solutions. I would appreciate if you would take a few minutes to complete this survey.

1. What is your current rank?
 - a. Lieutenant
 - b. Captain
 - c. Major
 - d. Lieutenant Colonel
 - e. Colonel

2. What aeronautical rating do you have?
 - a. Rated pilot
 - b. Rated navigator/WSO
 - c. Air-battle manager
 - d. Non-rated

3. What was your aircraft background?
 - a. F-16
 - b. A-10
 - c. F-15
 - d. F-15E
 - e. B-52
 - f. B-1
 - g. B-2
 - h. F-4
 - i. F-111
 - j. A-37
 - k. Other _____

4. What component of the Air Force do you belong?
 - a. Active
 - b. National Guard

5. What is your current ALO duty assignment?
 - a. Battalion ALO
 - b. Brigade ALO
 - c. Division ALO
 - d. Corps ALO
 - e. Air Support Operations Center (ASOC)
 - f. Other _____

6. What type of Army unit do you support?
 - a. Armor/Mechanized Infantry Unit
 - b. Airborne/Air Assault/Light Infantry Unit
 - c. Aviation Unit

7. How long have you performed the ALO duty?
 - a. 0-1 year
 - b. 1-3 years
 - c. 3-5 years
 - d. Other _____ (write total number of years)

8. How many ALO tours have you performed?
 - a. Current tour
 - b. 2 Tours
 - c. Other _____ (write total number of tours)

9. Would you volunteer for another ALO tour later in your career?
 - a. Yes
 - b. No

10. If your answer to question 9 was no, circle your reason why not?
 - a. I need flying tours for career progression.
 - b. I already spent my time in the barrel.
 - c. Would rather perform a flying duty.
 - d. Would rather perform a different non-flying duty.
 - e. Other (please specify)

11. What is your perception of the ALO tour?
 - a. Helped my career.
 - b. Hurt my career.
 - c. No perception.

12. Why did you become an ALO?
 - a. I wanted to perform the ALO duty.
 - b. I wanted to work with and learn more about the Army.
 - c. The ALO duty looked interesting.
 - d. I volunteered so that I would receive a better Aircraft.
 - e. I volunteered so that I would receive a better follow on duty.
 - f. ALO duty was the only job available.
 - g. Non volunteered into position.
 - h. Other (please specify)

13. Number the following ALO tasks in order of priority - 1 (highest priority) through 13 (lowest).
- Advise the Army Commander on capabilities and proper employment of USAF assets.
 - Assist the Operations officer and/or FSO, plan the integration of CAS and Air Interdiction into the operations scheme of maneuver.
 - Direct the control of Close Air Support Aircraft.
 - Submit Pre-planned Air requests.
 - Submit Immediate Air Request.
 - Coordinate with fire support on the deconfliction of airspace.
 - Coordinate with fire support on marking rounds and SEAD operations.
 - Provides Air Force input into the A2C2 operations.
 - Attend Targeting meetings and assist in the targeting process.
 - Operates and maintains the Air Force Air request net and the TACAIR direction net.
 - Command the TACP element.
 - Pass information to the Intelligence officer.
 - Other (please identify)
-
-
-

14. Which of the following skills or knowledge are essential to be an ALO. (Circle only the items that are a must)?
- a. Knowledge of Aircraft weapons and their effects.
 - b. Knowledge of Aircraft tactics and employment.
 - c. Experience in the Fighter Cockpit doing CAS.
 - d. Knowledge of the Targeting process.
 - e. Knowledge of the Military Decision-Making Planning Process.
 - f. Knowledge of radio systems.
 - g. Experience in the Cockpit as an AFAC.
 - h. Knowledge of enemy air defenses.
 - i. Knowledge of Army operations.
 - j. Knowledge of Army Staff coordination.
 - k. Knowledge of other Fire Support assets.
 - l. Must be an aeronautical rated officer (pilot/navigator).
 - m. Other (please specify)
-
-

15. Which of the above do you consider the top five most important?
- 1.
 - 2.
 - 3.
 - 4.
 - 5.

16. Do you believe an ETAC (a noncommissioned officer) can perform the mission of a BALO adequately?
- a. Yes
 - b. No

17. If the answer to question 16 was no, circle your reason why not.

- a. Must be an officer to be effective.
 - b. Must be a pilot to be effective.
 - c. ETACs are not qualified to do all the tasks of an ALO.
 - d. Army Officers give more credibility to other officers.
 - e. Other (please specify)
-
-

18. Do you believe an ALO needs to be a rated officer?

- a. Yes
- b. No

19. If your answer to question 18 was yes, please give a reason.

- a. Only a rated officer has the knowledge needed for the ALO duty.
 - b. Only a rated officer has the experience needed for the ALO duty.
 - c. The Army expects a rated officer in that position.
 - d. Other (please specify)
-
-

20. Do you believe Air-battle managers should be considered for the ALO duty?

- a. Yes
- b. No

21. If your answer to question 20 was no, please give a reason.

- a. They do not have a fighter/bomber background.
 - b. They do not have the close air support experience/knowledge.
 - c. They will take longer to train to perform the duty.
 - d. Other (please identify)
-
-

22. How long did it take you to become proficient performing the ALO duty?

- a. Immediately
- b. 2-3 months
- c. 6 months
- d. 6-12 months
- e. 12 or more months

23. What was the most important training you received to perform your duty as an ALO?

- a. Joint Firepower Control Course (JFCC).
 - b. On the job training (OJT).
 - c. Undergraduate Pilot Training (UPT).
 - d. Other (Please specify)
-
-

24. Do you believe the Joint Firepower Control Course should be improved for specific ALO orientation?
- a. Yes
 - b. No

25. Do you have any suggestions on how to improve ALO training to better prepare an ALO for his duty?

26. Do you believe there is an ALO manning problem?
- a. Yes
 - b. No

27. If your answer to question 26 was yes, please select those factors that contribute to the ALO manning problem?

- a. Not a flying duty.
- b. Not career enhancing.
- c. Dislike for the duty.
- d. Difficult duty.
- e. Other (please specify)

28. If your answer to question 26 was yes, what factors would help resolve the ALO manning problem?

- a. Make flying hours available to ALOs to maintain currency.
- b. Make the duty career enhancing.
- c. Develop a non-rated ALO career AFSC.
- d. Improve follow-on assignment priority.
- e. Other (please specify)

29. **Circle one or more** of the manning options you believe are available to assign the ALO and BALO duty?

- a. Use ETACs (for BALO duty only).
- b. Use Non-rated officers.
- c. Use Air-battle managers.
- d. Other (please specify)

30. List the above in order of priority for a possible solution to the ALO manning.

- 1. ___
- 2. ___
- 3. ___
- 4. ___

31. Do you believe that TACP issues are sufficiently addressed at Air Staff and Air Combat Command (ACC)?

- a. Yes
- b. No

32. Should the Air Force develop an Air Liaison Officer career field?

- a. Yes
- b. No

33. If your answer to question 32 was yes, please circle one or more of your reasons.

- a. Will solve the ALO manning problem.
- b. Will provide for continuity in the ALO duty and representation throughout the Air Force.
- c. Will improve the performance of the ALO duty.
- d. Other (please specify)

34. If your answer to question 32 was no, please circle one or more of your reasons.

- a. The current ALO manning and duty is working fine.
- b. There is no need for continuity in the ALO duty or representation throughout the Air Force.
- c. There is no need to improve the current ALO duty performance.
- d. It would be too hard to do.
- e. Other (please specify)

35. Do you believe the Air Force should transfer the Tactical Air Control mission to the Army and provide assets for training the Army air controllers.

- a. Yes
- b. No

36. If your answer to question 35 was yes, please give a reason.

- a. The Air Force does not accomplish the mission suitably.
- b. The Air Force does not have the sufficient manning.
- c. The Army could do this mission better.
- d. Other (Please specify)

37. How often do you see your Army unit staff members?

- a. Daily
 - b. Weekly
 - c. During exercises
 - d. Other (please specify)
-
-

38. Do you feel the Army appreciates your work?

- a. Yes
- b. No

39. Do you feel the Air Force appreciates your work?

- a. Yes
- b. No

40. How would you rate your ALO tour among all your duty assignments?

- a. Top
- b. Near top
- c. Middle
- d. Near bottom
- e. Bottom

Thank you for your feedback.

APPENDIX B

SURVEY FOR TACTICAL AIR COMMAND AND CONTROL SPECIALIST - 1C4 (ROMADS)

This survey concerns the Air Liaison Officer (ALO) duty. It was developed to receive opinions from current ROMADs to help improve the ALO duty assignment and training. It also addresses the ALO manning problem and the possible solutions. I would appreciate if you would take a few minutes to complete this survey.

1. What is your current rank?
 - a. CMSGT
 - b. SMSGT
 - c. MSGT
 - d. TSGT
 - e. SSGT

2. How many years have you been a 1C4 (ROMAD)?
 - a. >20
 - b. 15-20
 - c. 10-14
 - d. <10

3. To the best of your recollection, how many ALOs have you worked for or with?
 - a. >30
 - b. 20-30
 - c. 10-19
 - d. 6-9
 - e. <5

4. What component of the Air Force do you belong?
 - a. Active
 - b. National Guard

5. What is your current duty assignment?
 - a. Battalion TACP
 - b. Brigade TACP
 - c. Division TACP
 - d. Corps TACP
 - e. Air Support Operations Center (ASOC)
 - f. Other _____

6. What type of Army unit do you support?
 - a. Armor/Mechanized Infantry Unit
 - b. Airborne/Air Assault/Light Infantry Unit
 - c. Aviation Unit

7. Are you currently an ETAC?
 - a. Yes
 - b. No

8. If you are not currently an ETAC, were you an ETAC anytime in your career?
 - a. Yes
 - b. No

9. If you were an ETAC, how long have you been an ETAC?
 - a. _____ (write total number of years)

10. If you are (or were) an ETAC, who was your primary trainer in terminal strike control?
 - a. ALO
 - b. Another ETAC
 - c. Other (please identify) _____

11. Number the following ALO tasks in order of priority - 1 (highest priority) through 13 (lowest).
 - ___ Advise the Army Commander on capabilities and proper employment of USAF assets.
 - ___ Assist the Operations officer and/or FSO, plan the integration of CAS and Air Interdiction into the operations scheme of maneuver.
 - ___ Direct the control of Close Air Support Aircraft.
 - ___ Submit Pre-planned Air requests.
 - ___ Submit Immediate Air Request.
 - ___ Coordinate with fire support on the deconfliction of airspace.
 - ___ Coordinate with fire support on marking rounds and SEAD operations.
 - ___ Provides Air Force input into the A2C2 operations.
 - ___ Attend Targeting meetings and assist in the targeting process.
 - ___ Operates and maintains the Air Force Air request net and the TACAIR direction net.
 - ___ Command the TACP element.
 - ___ Pass information to the Intelligence officer.
 - ___ Other (please identify)

12. Which of the following skills or knowledge are essential to be an ALO. (Circle only the items that are a must)?

- a. Knowledge of Aircraft weapons and their effects.
- b. Knowledge of Aircraft tactics and employment.
- c. Experience in the Fighter Cockpit doing CAS.
- d. Knowledge of the Targeting process.
- e. Knowledge of the Military Decision-Making Planning Process.
- f. Knowledge of radio systems.
- g. Experience in the Cockpit as an AFAC.
- h. Knowledge of enemy air defenses.
- i. Knowledge of Army operations.
- j. Knowledge of Army Staff coordination.
- k. Knowledge of other Fire Support assets.
- l. Must be an aeronautical rated officer (pilot/navigator).
- m. Other (please specify)

13. Which of the above do you consider the top five most important?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

14. Are you currently performing a BALO duty?

- a. Yes
- b. No

15. If the answer to question 14 is yes, what was the most important training you received to perform your duty as a BALO?

- a. Joint Firepower Control Course (JFCC).
- b. Terminal Attack Control (TAC) training and certification.
- c. On the job training (OJT).
- d. Other (Please specify)

16. Should the Air Force use ETACs to perform the BALO duty?

- a. Yes
- b. No

17. If your answer to question 16 is no, please circle one or more of your reasons.

- a. Must be an officer to be effective.
- b. Must be a pilot to be effective.
- c. ETACs are not qualified to do all the tasks of an ALO.
- d. Army Officers give more credibility to other officers.
- e. Other (please specify)

18. How often do you see your assigned Army unit staff?

- a. Daily
- b. Weekly
- c. During exercises
- d. Other (please specify)

19. Do you believe an ALO needs to be a rated officer?

- a. Yes
- b. No

20. If your answer to question 19 was yes, please give a reason.

- a. Only a rated officer has the knowledge needed for the ALO duty.
- b. Only a rated officer has the experience needed for the ALO duty.
- c. The Army expects a rated officer in that position.
- d. Other (please specify)

21. Do you believe Air-battle managers should be considered for the ALO duty?

- a. Yes
- b. No

22. If your answer to question 21 was no, please give a reason.

- a. They do not have a fighter/bomber background.
- b. They do not have the close air support experience/knowledge.
- c. They will take longer to train to perform the duty.
- d. Other (please specify)

23. Do you believe the Joint Firepower Control Course should be improved for specific ALO/BALO orientation?

- a. Yes
- b. No

24. Do you have any suggestions on how to improve ALO training to better prepare an ALO for his duty?

25. Do you believe there is an ALO manning problem?

- a. Yes
- b. No

26. If your answer to question 25 was yes, please select those factors, that you believe, contribute to the ALO manning problem?

- a. Not a flying duty.
- b. Not career enhancing.
- c. Dislike for the duty.
- d. Difficult duty.
- e. Other (please specify)

27. If your answer to question 25 was yes, what factors would help resolve the ALO manning problem?

- a. Make flying hours available to ALOs to maintain currency.
- b. Make the duty career enhancing.
- c. Develop a non-rated ALO career AFSC.
- d. Improve follow-on assignment priority.
- e. Other (please specify)

28. Circle one or more of the manning options you believe are available to assign the ALO and BALO duty?

- a. Use ETACs (for BALO duty only).
- b. Use Non-rated officers.
- c. Use Air-battle managers.
- d. Other (please specify)

29. List the above in order of priority for a possible solution.

- 1. ___
- 2. ___
- 3. ___
- 4. ___

30. Do you believe that TACP issues are sufficiently addressed at Air Staff and Air Combat Command (ACC)?
- Yes
 - No
31. Should the Air Force develop an Air Liaison Officer career field?
- Yes
 - No
32. If your answer to question 31 was yes, please circle one or more of your reasons.
- Will solve the ALO manning problem.
 - Will provide for continuity in the ALO duty and representation throughout the Air Force.
 - Will improve the performance of the ALO duty.
 - Other (please specify)
-
-
-
33. If your answer to question 31 was no, please circle one or more of your reasons.
- The current ALO manning and duty is working fine.
 - There is no need for continuity in the ALO duty or representation throughout the Air Force.
 - There is no need to improve the current ALO duty performance.
 - It would be too hard to do.
 - Other (please specify)
-
-
-
34. Do you believe the Air Force should transfer the Tactical Air Control mission to the Army and provide assets for training the Army air controllers.
- Yes
 - No
35. If your answer to question 34 was yes, please give a reason.
- The Air Force does not accomplish the mission suitably.
 - The Air Force does not have the sufficient manning.
 - The Army could do this mission better.
 - Other (Please specify)
-
-
-
36. Should all ALOs be Terminal Attack Control (TAC) qualified?
- Yes
 - No

37. In your experience, which officer generally makes the best ALO? Rate the following in order from best (1) to least (12).

- A-10
- F-15 (air superiority)
- F-15E (interdiction)
- F-16 (multi-role)
- F-111 pilot
- F-111 WSO
- B-52 pilot
- B-52 nav/ewo
- Trainer pilot (T-38/37, etc.)
- Air-battle manager
- Non-rated ALO
- Other (please specify) _____

38. Do you feel the Army appreciates your work?

- a. Yes
- b. No

39. Do you feel the Air Force appreciates your work?

- a. Yes
- b. No

40. Please feel free to offer any additional information concerning ALOs that was not addressed in this questionnaire.

Thank you for your feedback.

APPENDIX C

SURVEY FOR ARMY OFFICERS

This survey concerns the Air Liaison Officer (ALO) duty. It was developed to obtain opinions from current Army leadership to help improve the ALO duty assignment and training. Your answers will not be seen by your ALO or the ALO's Air Force unit (ASOS) and will not negatively affect your ALO's officer performance record. I would appreciate if you would take a few minutes to complete this survey.

1. What is your current rank?
 - a. Captain
 - b. Major
 - c. Lieutenant Colonel
 - d. Colonel

2. What is your duty position?
 - a. Commander
 - b. Chief of Staff/XO
 - c. G-3/S-3
 - d. G-3/S-3 Air
 - e. FSCORD/FSO

3. What is your Army unit echelon?
 - a. Battalion
 - b. Brigade
 - c. Division
 - d. Corps

4. What is your component of the Army?
 - a. Active
 - b. National Guard
 - c. Reserve

5. What type of Army unit?
 - a. Armor/Mechanized Infantry unit
 - b. Airborne/Air Assault/Light Infantry unit
 - c. Aviation unit

6. How often do you see your assigned unit ALO?
 - a. Daily
 - b. Weekly
 - c. During exercises
 - d. Other (please specify)

7. How much time should your ALO spend with you and/or your staff per week?
 - a. Less than an hour.
 - b. From 1-3 hours.
 - c. 3-6 hours.
 - d. More than 6 hours.
8. Do you feel your ALO is an integral part of your unit or merely "guest help" that performs a specific function?
 - a. Integral part
 - b. Guest help
9. How often do you see your assigned unit ETAC (Enlisted Terminal Attack Controller)?
 - a. Daily
 - b. Weekly
 - c. During exercises
 - d. Other (please specify)

10. Number the following ALO tasks in order of priority – 1 (highest priority) through 13 (lowest).
 - Advise the Army Commander on capabilities and proper employment of USAF assets.
 - Assist the Operations officer and/or FSO, plan the integration of Close Air Support (CAS) and Air Interdiction into the operations scheme of maneuver.
 - Direct the control of Close Air Support Aircraft.
 - Submit Pre-planned Air Request.
 - Submit Immediate Air Request.
 - Coordinate with fire support on the deconfliction of airspace.
 - Coordinate with fire support on marking rounds and SEAD operations.
 - Provides Air Force input into the A2C2 operations.
 - Attend targeting meetings and assist in the targeting process.
 - Operates and maintains the Air Force Air request net and the TACAIR direction net.
 - Command the TACP element.
 - Pass information to the intelligence officer.
 - Other (please identify)

11. Which of the following skills or knowledge do you feel are essential to be an ALO? (Circle only the items that are a must)?
- a. Knowledge of Aircraft weapons and their effects.
 - b. Knowledge of Aircraft tactics and employment.
 - c. Experience in the Fighter Cockpit doing CAS.
 - d. Knowledge of the Targeting process.
 - e. Knowledge of the Military Decision-Making Planning Process.
 - f. Knowledge of the radio systems.
 - g. Experience in the Cockpit as an AFAC.
 - h. Knowledge of enemy air defenses.
 - i. Knowledge of Army operations.
 - j. Knowledge of Army Staff coordination.
 - k. Knowledge of other Fire Support assets.
 - l. Must be an aeronautical rated officer (pilot/navigator).
 - m. Other (please specify)
-
-

12. Which of the above do you consider the top five most important?

- 1. ___
- 2. ___
- 3. ___
- 4. ___
- 5. ___

13. Which of the following applies to your ALO?

- a. Aeronautical rated officer (pilot, navigator, weapon systems officer)
- b. Air-battle manager (Air Force radar controller)
- c. Non-rated officer
- d. Enlisted Terminal Attack Controller (ETAC)
- e. Don't know

14. How long has your current ALO been assigned to your unit?

- a. 0-1 year
- b. 1-2 years
- c. 2-3 years
- d. Don't know

15. How long have you been in your current duty assignment?

- a. 0-1 year
- b. 1-2 years
- c. 2-3 years
- d. 3 or more years

16. Can you list any areas that the Air Force could improve upon for ALO training?

- a. Integration into the planning process
- b. Staff operations
- c. Execution of the CAS mission
- d. Field training (site set-up, camouflage)
- e. Other (please specify)

17. Taking into consideration your first hand knowledge and any anecdotal information you have acquired over time, what is your general impression of ALOs?

- a. Generally top notch individuals
- b. Quality officers
- c. Competent officers
- d. Barely competent officers
- e. Generally below average

18. Taking into consideration your first hand knowledge and any anecdotal information you have acquired over time, what is your general impression of ALO competency?

- a. Well trained and knowledgeable.
- b. Meet standards and require little additional training.
- c. Notable deficiencies in training requiring much training.
- d. Clueless about their mission and yours.

19. Do you believe an ALO needs to be a rated officer (pilot, navigator, weapon systems operator)?

- a. Yes
- b. No

20. If your answer to question 19 was yes, please give a reason.

- a. Only a rated officer has the knowledge needed for the ALO duty.
- b. Only a rated officer has the experience needed for the ALO duty.
- c. The Army expects a rated officer in that position.
- d. Other (please specify)

21. Do you believe Air-battle managers (Air Force radar controllers) should be considered for the ALO duty?

- a. Yes
- b. No

22. If your answer to question 21 was no, please give a reason.

- a. They do not have a fighter/bomber background.
- b. They do not have the close air support experience/knowledge.
- c. They will take longer to train to perform the duty.
- d. Other (please specify)

23. Do you believe an ETAC (a noncommissioned officer) can perform the mission of a BALO (Battalion ALO) adequately?

- a. Yes
- b. No

24. If the answer to question 23 was no, circle your reason why not.

- a. Must be an officer to be effective.
- b. Must be a pilot to be effective.
- c. ETACs are not qualified to do all the tasks of an ALO.
- d. Army Officers give more credibility to other officers.
- e. Other (please specify)

25. Should the Air Force develop an Air Liaison Officer career field (Non-rated ALO who performs only the ALO duty)?

- a. Yes
- b. No

26. If your answer to question 25 was yes, please circle one or more of your reasons.

- a. Will solve the ALO manning problem.
- b. Will provide for continuity in the ALO duty and representation throughout the Air Force.
- c. Will improve the performance of the ALO duty.
- d. Other (please specify)

27. If your answer to question 25 was no, please circle one or more of your reasons.

- a. The current ALO manning and duty is working fine.
- b. There is no need for continuity in the ALO duty or representation throughout the Air Force.
- c. There is no need to improve the current ALO duty performance.
- d. It would be too hard to do.
- e. Other (please specify)

28. Please rank the following 1 (most favorable) to 6 (least favorable) as to your preference for an ALO working in your TOC.

- ___ Experienced air to ground pilot.
- ___ Experienced Fighter pilot.
- ___ Any Air Force pilot or rated officer.
- ___ A career Non-rated ALO.
- ___ An Air-battle Manager
- ___ An ETAC.

29. Do you believe the Army should develop a Tactical Air Control career field (ALO and ETACs) with the Air Force providing assets to assist in the training of the Army air controllers?
- a. Yes
 - b. No
30. If your answer to question 29 was yes, please give a reason.
- a. The Air Force does not accomplish the mission suitably.
 - b. The Air Force does not have the sufficient manning.
 - c. The Army could do this mission better.
 - d. Other (Please specify)
-
-
31. In your opinion, based on your impressions, is the USAF living up to its end of the air-ground mission?
- a. Yes
 - b. No
32. From your experience working with ALOs, how would you rate Air Force ALOs in general?
- a. Above average
 - b. Better than average
 - c. Average
 - d. Little less than average
 - e. Below average

Thank you for your feedback.

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