

Building the Plane Inflight: Observations from Case Studies in Wartime Flight Training for Partner Nations

A Monograph

by

Major Timothy J. Day
United States Air Force



School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

2016

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Service Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ORGANIZATION.

1. REPORT DATE (DD-MM-YYYY) 07-04-2016		2. REPORT TYPE SAMS Monograph		3. DATES COVERED (From - To) JUN 2015 - May 2016	
4. TITLE AND SUBTITLE Building the Plane Inflight: Observations from Case Studies in Wartime Flight Training for Partner Nations				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Major Timothy J. Day, USAF				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Advanced Military Studies Program				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This monograph explores what the operational artist should know about conducting wartime flight training to develop partner nations' airpower capacity. The danger and exigency of war and the technical demands of modern combat aircraft amplify the difficulties of military assistance and advising in peacetime. A successful wartime flight training program will anticipate the challenges of culture and language, foster robust political and institutional commitments with clear objectives, and develop sustainable and integrated aviation forces tailored to the combat requirements of partner nations. This study employs a structured, focused comparison of three historical case studies of wartime flight training conducted by the US Air Force: the Mexican Expeditionary Air Force in World War II ("Aztec Eagles," 1944-1945), the Republic of Korea Air Force ("Bout One," 1950-1951), and the South Vietnamese Air Force ("Flying Dragons," 1955-1975). The cases are analyzed across three dimensions: culture (language and social challenges), commitment (donor funding, political guarantees, and institutional pressures), and combat (results of tailored training programs). This selective landscape of wartime flight training for partner nations presents operational observations for military assistance.					
15. SUBJECT TERMS flight training, pilot training, military assistance, building partner capacity, foreign internal defense, Mexican Expeditionary Air Force, Aztec Eagles, Joint Mexican-United States Defense Commission, Paul Miller, Republic of Korea Air Force, Bout One, 201st Mexican Fighter Squadron, Dean Hess, South Vietnamese Air Force, Flying Dragons, Kenneth Moranville, Nguyen Cao Ky, Flaming Dart, Farm Gate, Project Enhance					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Major Timothy J. Day
(U)	(U)	(U)	(U)	92	19b. TELEPHONE NUMBER (Include area code) 913-758-3300

Reset

Monograph Approval Page

Name of Candidate: Major Timothy J. Day

Monograph Title: Building the Plane Inflight: Observations from Case Studies in Wartime Flight Training for Partner Nations

Approved by:

_____, Monograph Director
Dan C. Fullerton, PhD

_____, Seminar Leader
Dyrald J. Cross, COL

_____, Director, School of Advanced Military Studies
Henry A. Arnold III, COL

Accepted this 10th day of May 2016 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, PhD

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

Fair use determination or copyright permission has been obtained for the inclusion of pictures, maps, graphics, and any other works incorporated into this manuscript. A work of the United States Government is not subject to copyright, however further publication or sale of copyrighted images is not permissible.

Abstract

Building the Plane Inflight: Observations from Case Studies in Wartime Flight Training for Partner Nations, by Major Timothy J. Day, 91 pages.

This monograph explores what the operational artist should know about conducting wartime flight training to develop partner nations' airpower capacity. The danger and exigency of war amplifies the difficulties of military assistance and advising in peacetime. Technical demands such as training to fly modern combat aircraft further amplify the challenges of building partner capacity and foreign internal defense. A successful wartime flight training program will anticipate the challenges of culture and language, foster robust political and institutional commitments with clear objectives, and develop sustainable and integrated aviation forces tailored to the combat requirements of partner nations.

This study employs a structured, focused comparison of three historical case studies of wartime flight training conducted by the US Air Force: the Mexican Expeditionary Air Force in World War II ("Aztec Eagles," 1944-1945), the Republic of Korea Air Force ("Bout One," 1950-1951), and the South Vietnamese Air Force ("Flying Dragons," 1955-1975). The cases are analyzed across three dimensions: culture (language and social challenges), commitment (donor funding, political guarantees, and institutional pressures), and combat (results of the training and tailoring training programs to partner nation requirements). This selective landscape of wartime flight training for partner nations presents operational observations for future military assistance. The operational planner should dedicate time and resources to pre-training language courses, align tactical programs with strategic objectives to engender maximum levels of political and fiscal support, and build and train to integrated and sustainable combat capability including tactical air control systems and aircraft maintenance and supply.

Contents

Acknowledgements.....	vi
Acronyms.....	vii
Introduction.....	1
Flight Training in History and Doctrine.....	2
Flight Training in Theory.....	5
Methodology for Case Studies.....	10
Case #1 – “Aztec Eagles,” Mexican Expeditionary Air Force, 1944-1945.....	11
Road to War.....	13
The Training.....	21
Culture.....	24
Commitment.....	26
Combat.....	29
Their Own Air Force.....	33
Case #2 – “Bout One,” Republic of Korea Air Force, 1950-1951.....	34
Road to War.....	35
The Training.....	37
Culture.....	41
Commitment.....	43
Combat.....	45
Their Own Air Force.....	45
Case #3 – “Flying Dragons,” South Vietnamese Air Force, 1955-1975.....	47
Road to War.....	49
The VNAF in Two Squadrons.....	53
Training and Equipping.....	55
Culture.....	61

Commitment	65
Combat.....	71
Their Own Air Force.....	75
Observations from Case Studies.....	78
Culture.....	79
Commitment	80
Combat.....	82
Conclusion	83
Bibliography	85

Acknowledgements

A number of individuals deserve recognition for their contributions to this monograph. First, thank you to the professors and staff of the School of Advanced Military Studies for an incomparable experience that broadened my intellectual horizons. As both a classroom instructor and my monograph director, Dr. Dan Fullerton reignited my excitement for history through his appreciation for detail and patience with my discovery process. Dr. Jeffrey Kubiak encouraged me to examine the world more deeply, challenging my habits of mind and patterns of inquiry. Dr. Scott Gorman endured my intellectual curiosity and modelled how to embrace knowledge with humility. Colonel Dyrald Cross, Canadian Army, never faltered in his encouragement and *joie de vivre*, demonstrating a model of cross-cultural military partnership. My appreciation is also owed to men I never met, yet who inspired me through this research – Captain Paul Miller, Major Dean Hess, and Lieutenant Ken Moranville. Their persistence and sacrifice directly shaped the partner air forces described here, and their selfless service reminds me that some of the greatest combat heroes did yeoman’s work. My boys, Jonathan, Ryan, William, and Isaac, indulged my random discoveries and history lessons and gave me great reason to dig out from the books. And finally thank you to my wife Leslie, whose patience, friendship, and prayers provided great encouragement through a long process.

Acronyms

AAF	Army Air Forces
ARVN	Army of the Republic of Vietnam
ATC	Air Training Command
AvFID	Aviation foreign internal defense
BPC	Building partner capacity
CTZ	Corps Tactical Zone
DPRK	Democratic People's Republic of Korea (North Korea)
FEAF	Far East Air Forces
FID	Foreign internal defense
JMUSDC	Joint Mexican-United States Defense Commission
KMAG	Korea Military Advisory Group
MAAG	Military Assistance Advisory Group
MACV	Military Assistance Command Vietnam
MEAF	Mexican Expeditionary Air Force
MS	Morane-Saulnier aircraft manufacturing company
NVA	North Vietnamese Army
ROK	Republic of Korea (South Korea)
ROKA	Republic of Korea Army
ROKAF	Republic of Korea Air Force
RVNAF	Republic of Vietnam Armed Forces
SA	Security assistance
SC	Security cooperation
SWPA	South West Pacific Area
USAF	United States Air Force
VNAF	South Vietnamese Air Force

Introduction

With two thousand years of examples behind us we have no excuse, when fighting, for not fighting well.

—T.E. Lawrence, *Lawrence of Arabia*

Since the beginning of World War II, with over sixty-five years of American examples behind us, we have no excuse, when advising, for not advising well.

—Robert D. Ramsey III, *Advising Indigenous Forces*

Governments have provided training, advice, and assistance to the militaries of partner nations since the days of Sun-Tzu. The emergence of new threats and new technologies have brought new reasons to initiate, deepen, and expand military assistance. In some cases, that assistance has taken the form of technical and professional advising. Sometimes it has meant financial grants, arms transfers, and foreign military sales. Responses to insurgencies and revolutionary threats have required collaborations on foreign internal defense. Building alliances against common threats have necessitated building partner capacity.¹ And in many cases, military assistance to partner nations has required training for combat, often during wartime itself.

The task to conduct wartime training presents one of the most unpredictable operational challenges for military forces. The danger and urgency of war amplifies the difficulties of advising in peacetime – setting goals, gathering resources, establishing relationships, developing rapport, and mastering technical tasks. In war, explained military theorist Carl von Clausewitz, “the simplest thing is difficult.”² When technical demands further amplify the difficulty of

¹ James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence, KS: University Press of Kansas, 2003); Stephanie G. Neuman, *Military Assistance in Recent Wars: The Dominance of the Superpowers* (New York: Praeger Publishers, 1986); Patrick Daley, “Exporting Airpower: The Challenges of Building Partner Nation Air Capacity for Irregular Warfare” (master’s thesis, School of Advanced Air and Space Studies, 2008).

² Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 119.

training, as in the case of training to fly modern combat aircraft, the exigency of wartime efforts becomes resource intensive and time consuming. Aviation historians James S. Corum and Wray R. Johnson noted that war offers neither the space nor time required to accomplish such training:

Because of the highly complex and technical nature of an air force and the technical expertise required to manage even routine air operations, it takes many years for a country to develop an effective air force... Despite considerable outside aid and support, the air forces of many developing nations still require years of training and infrastructure development before they can be effective.³

This monograph explores what the operational artist should know about conducting wartime flight training to develop partner nations' airpower capacity. Through a structured, focused comparison of three historical case studies – the Mexican Expeditionary Air Force, the Republic of Korea Air Force, and the South Vietnamese Air Force – observations are offered to guide future efforts to train partner nation air forces. A successful wartime flight training program will anticipate the challenges of culture and language, foster robust political and institutional commitments with clear objectives, and develop a sustainable and integrated aviation force tailored to the combat requirements of the partner nation.

Flight Training in History and Doctrine

Reflective of the history and doctrine of military assistance, this study joins the growing search for theories of action that might guide military assistance. Like Clausewitz's perception of war itself, military assistance is "not merely an act of policy but a true political instrument."⁴ Soldier-scholar William H. Mott IV noted that "military assistance has been used, in various guises, as an element of foreign policy since the beginnings of history and throughout the world."⁵ Hessians in the Eighteenth Century earned a reputation for their mercenary trade: war

³ Corum and Johnson, *Airpower in Small Wars*, 436.

⁴ Clausewitz, *On War*, 87.

⁵ William H. Mott IV, *Military Assistance: An Operational Perspective*, Contributions in Military Studies No. 170 (Westport, CT: Greenwood Press, 1999), 2.

for hire. Competition between Nineteenth Century imperial powers opened the door for naval privateers and colonial armies: war by proxy. Then in the early Twentieth Century, Lawrence of Arabia made famous the advisor version of assistance: war by counsel. Later, military assistance evolved into another form. Mott explained that in the middle of the last century, “after lying concealed in imperial responsibilities for colonial security, military assistance reemerged in diplomacy and strategy with the American Lend-Lease programs of World War II...a supplement to major Allied military objectives.”⁶ This led to a new realm of assistance in the Cold War, as the United States and the Soviet Union sought to fund partner militaries around the globe: war through buying friends. The challenges of terrorism and failed states in the last few decades rejuvenated the ideas of foreign internal defense (FID) and building partner capacity (BPC): war by exporting combat capability.

The story of airpower capability has been much the same. New pilots from the United States trained with French instructors in the Lafayette Escadrille during World War I. The Eighth Air Force’s fighter training groups exported instruction to Britain during World War II (WWII). Royal Air Force pilots did the same with the Royal Hellenic Air Force during Greece’s civil war in the late 1940s, and later fought insurgents during the Malayan emergency of the 1950s. US Air Force (USAF) pilots advised the Salvadoran Air Force and flew direct action missions to defeat the insurrection in El Salvador during the 1980s.⁷ The USAF continues to train partner nation air forces today. Through Train, Advise, Assist Command-Air, North Atlantic Treaty Organization’s air advisory effort in Kabul, the USAF instructs the fledgling Afghan Air Force in rotary wing, fixed-wing transport, and tactical airlift. Last year, the USAF began training Afghan pilots and maintainers at Moody Air Force Base, Georgia, to fly and employ the A-29 light air support

⁶ Mott, *Military Assistance*, 2.

⁷ Norman J. Brozenick, Jr., “Small Wars, Big Stakes: Coercion, Persuasion, and Airpower in Counterrevolutionary Warfare” (master’s thesis, School of Advanced Airpower Studies, 1998), 121-175.

aircraft. The initial cadre of students returned to Afghanistan in January to support the Afghan National Army. Iraqi Air Force pilots continue to train on the F-16 in Tucson, Arizona, preparing to join the present fight against the Islamic State of Iraq and the Levant. Understanding airpower in general and flight training in particular as elements of the political instrument of military assistance, a review of applicable definitions is in order.

Military assistance, broadly speaking, “involves providing equipment, funds, training, or leadership to the military forces of a recipient nation.”⁸ International arms trade expert Stephanie Neuman noted such assistance may be “in the form of a sale, offset arrangement, or grant.”⁹ Joint US military doctrine nests this support within security cooperation (SC), a broadly defined category of “interactions with foreign defense establishments to build defense relationships that promote specific US security interests, develop allied and friendly military capabilities for self-defense and multinational operations, and provide US forces with peacetime and contingency access to a host nation.”¹⁰ Comprising the political instrument of SC are security assistance (SA) and FID – the former being the provision of military material, training, and services, while the latter entails participation in direct actions of another government to protect against internal security threats.¹¹ Aviation FID (AvFID), then, is “assessing, training, advising, and assisting [host nation] aviation forces in the sustained use of airpower to help their governments deal with internal threats.”¹² Spanning many of these activities is international military education and training, which constitutes grants for “formal or informal instruction provided to foreign military

⁸ Mott, *Military Assistance*, 17.

⁹ Neuman, *Military Assistance in Recent Wars*, 7.

¹⁰ Joint Publication (JP) 3-22, *Foreign Internal Defense* (Washington, DC: Government Printing Office, 2010), GL-11.

¹¹ *Ibid.*, GL-7 and GL-11.

¹² Air Force Doctrine (AFD) Annex 3-2, *Irregular Warfare* (Washington, DC: Government Printing Office, 2013), 42.

students, units, and forces.”¹³ Finally, BPC includes any “efforts by a sponsor to build the capacity of a partner nation to provide for its internal security and governance.”¹⁴

Training partner nation militaries, therefore, may be conducted through grant or by sale, may be formal or informal, may incorporate equipment transfer or direct leadership, may be focused on external action or internal security, and could promote donor or recipient interests or both. This training might be used within BPC to develop specific capabilities; it might fall explicitly under international military education and training funding; it might be an element of FID engagement; or it might simply occur within broader SA or SC programs. As tactical and technical training present an essential element in any of these versions of military assistance, this study uses the terms of military assistance, security assistance, and security cooperation interchangeably. In any case, these military means constitute a political instrument used to support strategic objectives, because “inadequate equipment, training, and organization can prevent the military from developing a coherent subordinate strategy.”¹⁵ The research presented here investigates military assistance in support of US national strategy, examining one specific version: wartime flight training.

Flight Training in Theory

The prolific accounts of Lawrence’s World War I experience in Arabia spurred a whole class of analytical theory on the topics of military advising and BPC. Most students of modern military assistance may be described as either policy debaters or program dissectors.¹⁶ For the policy debaters, questions about SC center on the morality of the programs and whether or not

¹³ JP 3-22, GL-8.

¹⁴ Daley, “Exporting Airpower,” 100.

¹⁵ Brozenick, “Small Wars, Big Stakes,” 176.

¹⁶ These category terms are those of the author. The concept of two camps of military assistance critics is from Mott, *Military Assistance*, 8-9.

such programs support US strategic interests. These debaters associate along ideological divides. The program dissectors, on the other hand, deliberate functional divides. For them, the morality and utility of SC programs are foregone conclusions. Their focus centers on questions of where and when military assistance should be used, what fiscal policy should govern training and assistance, and how these programs can be measured and assessed. These theorists, understanding military assistance as a valid extension of political discourse, constitute most of the applicable literature in the field. Although many theorists and analysts have offered guidance for military training, most available theory addresses either the field practitioner at the tactical advisor level or the strategic planner at the policy and programming level.

Practical theories for military advisors grew from the initiation of Military Assistance Advisory Groups (MAAG) after World War II, and developed further from the US Army's experience in Vietnam. At the height of the Vietnam War, the advisors in the Military Assistance Command, Vietnam (MACV) numbered nearly twelve thousand US military professionals.¹⁷ Robert D. Ramsey III, in a Combat Studies Institute paper on advising indigenous forces, offered well-researched narratives of US Army advisors in Korea, Vietnam, and El Salvador. He identified three recurring challenges for advisors: lack of language ability and cultural understanding, difficulty in developing rapport with host nation counterparts, and formal and informal institutional pressures from the US military.¹⁸ A supplemental anthology, including a landmark ethnography of advisors in Vietnam, provided numerous first-hand accounts of advisors facing these very challenges in the field.¹⁹ In the early years of the Vietnam War, the USAF

¹⁷ Robert D. Ramsey III, *Advising Indigenous Forces: American Advisors in Korea, Vietnam, and El Salvador*, Global War on Terrorism Occasional Paper 18 (Fort Leavenworth, KS: Combat Studies Institute Press, 2007), 28-32.

¹⁸ Ramsey, *Advising Indigenous Forces*, 110-113.

¹⁹ Robert D. Ramsey III, *Advice for Advisors: Suggestions and Observations from Lawrence to the Present*, Global War on Terrorism Occasional Paper 19 (Fort Leavenworth, KS: Combat Studies Institute Press, 2012).

conducted advisory operations and flight training through the 4400th Combat Crew Training Squadron, nicknamed Jungle Jim. Three decades later, following the challenging experience of fighting insurgency in El Salvador, the USAF established the 6th Special Operations Squadron, which today remains the USAF's only standing air advisory force. Norman J. Brozenick, Jr., a former commander of that unit, identified five challenges for tactical-level combat aviation advisors: institutional reluctance, organizational oversight, manning limitations, training impediments, and availability of specialized aircraft.²⁰

Theories of military assistance for the strategic planner and policymaker have focused on the use of SC in irregular warfare, rather than on the challenges of the individual advisor. In their groundbreaking account, *Airpower in Small Wars*, Corum and Johnson presented key lessons for the employment of airpower resources in conflicts less than general war. They identified the need for a robust comprehensive military strategy, the role and value of both high- and low-tech airpower, and that small wars are long wars. Most significantly, they urged the US to dedicate more effort to training for these conflicts.²¹ Brozenick wrote a separate thesis on the use of airpower in counterrevolutionary warfare, concluding somewhat obviously that airpower can serve both persuasive and coercive roles, that it can have both positive and negative strategic effects, and that it is best employed in support of ground forces.²² In a thesis on building partner nation air capacity, Patrick Daley offered four main considerations to guide the decision to offer

²⁰ Norman J. Brozenick, Jr. "Another Way to Fight: Combat Aviation Advisor Operations," (report, Air Force Fellows Program, Air University, 2002), 41-52. USAF doctrine defines air advisers as "personnel who communicate professional knowledge and skills to HN [host nation] aviation personnel in order to improve HN airpower capabilities. Air advising is comprised of five core functions: assess, train, advise, assist, and equip...Air advising has historically been associated with SOF [special operations forces] conducting aviation FID. As IW [irregular warfare] scenarios have become more common – in Iraq and Afghanistan, for example – the demand on SOF assets has significantly increased, and general purpose forces (GPF) are now more frequently used as air advisors." AFD Annex 3-2, 23.

²¹ Corum and Johnson, *Airpower in Small Wars*, 425-439.

²² Brozenick, "Small Wars, Big Stakes," 176-186.

SA in irregular warfare: alignment of sponsor and partner goals, levels of partner resources, levels of sponsor commitment, and ability of sponsor trainers and advisors.²³ This theory provided the closest approximation of a set of guiding principles for designing military assistance programs, especially for aviation training. It presented the utility of BPC for irregular warfare and defined a methodology for assessing training programs in partner nations. However, even Daley’s attempt remained focused on the strategic decision-maker rather than the operational planner.

Other theories offered strategic planning guidance for SC activities and assessment frameworks for BPC programs – especially a host of analyses by the RAND Corporation, intended to guide future military assistance. Michael Childress evaluated the US military’s training and advisory programs for FID in El Salvador and Honduras in the 1980s. He concluded that “the United States military training establishment needs to be more sensitive to the indigenous training needs of Third World militaries.”²⁴ Alan J. Vick and his colleagues sought to shape that increased sensitivity, recommending the USAF make counterinsurgency warfare an institutional priority by creating organizations, processes and training programs that might enable more effective aviation advising.²⁵ Jennifer Moroney and her fellow researchers borrowed a five-level hierarchy of evaluation from social science, in order to guide implementation decisions and assessments of SC programs: need, design, process, outcomes, and cost-effectiveness.²⁶ While valuable contributions to policy makers, comptrollers, and auditors, these theories provided little

²³ Daley, “Exporting Airpower,” 113.

²⁴ Michael Childress, *The Effectiveness of US Training Efforts in Internal Defense and Development: The Cases of El Salvador and Honduras* (Santa Monica, CA: RAND, 1995), 70.

²⁵ Alan J. Vick, Adam Grissom, William Rosenau, Beth Grill, and, Karl P. Mueller, *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions* (Santa Monica, CA: RAND, 2006), xvii-xviii.

²⁶ Jennifer D.P. Moroney, Joe Hogler, Jefferson P. Marquis, Christopher Paul, John E. Peters, and Beth Grill, *Developing an Assessment Framework for U.S. Air Force Building Partnerships Programs* (Santa Monica, CA: RAND, 2010), 55-61. The hierarchy of evaluation from social science was developed in Peter H. Rossi, Mark W. Lipsey, and Howard E. Freeman, *Evaluation: A Systematic Approach*, 7th ed. (Thousand Oaks, CA: Sage Publications, 2004).

operational guidance on how to build an effective SC program. Whether used as pre-decisional guides or ex post facto evaluation tools, they fall short of describing how to conduct effective military assistance – especially the challenging task of wartime flight training.

Taken together, the vast body of military assistance theory concentrated on training in peacetime, and tended to “neglect the strategic use of military assistance in wartime.”²⁷ Mott lamented this lack of a “coherent body of theory” and sought to “offer some rationale for considering military assistance as a viable, deliberate policy option.”²⁸ Mott’s analysis of military assistance examined the relationship between donor and recipient in eight case studies of SC in wartime. He selected the relationship itself as the dependent variable, fixing four independent (and interdependent) variables: convergence of donor and recipient goals, control by the donor over assistance resources, commitment of the donor to the conflict at hand, and coherence of military assistance with the donor’s broader foreign policy.²⁹ His *a posteriori* theory prescribed using “military assistance as one element of an integrated approach to foreign policy, military strategy, and economic policy.”³⁰ So again, the use of military force and the means of SC, SA, BPC, and FID should be seen as component parts of the broader political instrument.

Mott’s model finally offered a rubric for wartime military assistance programs, but like the RAND analyses, it best suited the strategic level. The host of previously-reviewed historical accounts, pedagogical analyses and anthropological studies provided retroactive lessons and prescriptive instructions for military assistance, but best corresponded to the tactical military advisor. In either category, advice for aviation assistance programs remained elusive. Yet absent were operational observations to guide future wartime flight training.

²⁷ Mott, *Military Assistance*, 5.

²⁸ *Ibid.*, 10 and 19.

²⁹ *Ibid.*, 20-22.

³⁰ *Ibid.*, 25.

Methodology for Case Studies

This monograph presents three historical cases of wartime flight training conducted by the US Air Force: the Mexican Expeditionary Air Force in the latter stages of WWII (1944-1945), the Republic of Korea Air Force in the opening chapters of the Korean War (1950-1951), and the South Vietnamese Air Force before, during, and after the United States' involvement in the war in Vietnam (1955-1975).³¹ The methodology uses a structured, focused comparison to analyze the cases across three dimensions: culture, commitment, and combat.³² Examining wartime flight training through a cultural lens offers an analysis of language and social challenges in teaching pilots for whom English is not a first language, and identifies successful approaches to overcome these barriers. Reviewing wartime flight training through a commitment lens reveals the political guarantees and military obligations in the three cases, and reveals organizational and institutional pressures and donor commitment levels. Analyzing the cases through the lens of combat offers an assessment for the results of the training conducted, and demonstrates the necessity of tailoring flight training efforts to the combat requirements of the partner nation. Bounding this study to “wartime” rather than just “combat” permits an examination of training in both the United States and the partner nation, and juxtaposes training for combat with training while in combat.

³¹ The monograph prospectus originally proposed case studies of three other air forces during WWII: the Brazilian air force, the Chinese air force, and the Netherlands East Indies (NEI) air force. The Brazilian air force trained mostly in Brazil, often with US airline pilots, and then deployed to Italy. The Brazilian case was omitted from this monograph due to lack of data on the training program. The Chinese air force grew out of the efforts of Claire Chennault's American Volunteer Group, “The Flying Tigers.” While early training was conducted in Burma and India, and later training in the southwestern United States, much of the program remained outside the formal USAF structures and authority. The Chinese case was omitted from this monograph due to lack of data on the combat results of trained pilots. The NEI air force was a small organization cobbled together in Australia after the NEI fell to Japan. When Dutch pilots were brought to the United States for training, it was conducted by Dutch instructors, in Dutch-owned aircraft, funded entirely by the Netherlands. It was a case of pure foreign military sales, not Lend-Lease aid, and as such did not conform to the pattern of the other cases presented here.

³² Alexander L. George, “Case Studies and Theory Development: The Method of Structured, Focused Comparison,” in *Diplomacy: New Approaches in History, Theory, and Policy*, ed. Paul Gordon Lauren (New York: The Free Press, 1979), 43-68.

Doctrine warns that “it is important for planners to avoid ‘templating’ – assuming experiences and lessons learned in one location will automatically apply to another location.”³³ Recognizing this danger, the operational planner must still identify common characteristics of successful military assistance programs. As presented, the cases form a selective landscape of wartime flight training for partner nations in order to identify relevant observations for today’s operational requirements.³⁴ Understanding patterns and possible determinants of success will inform both decision-makers and training cadres. The USAF should recognize the enablers of past success, the constraints that threatened failure, and the instructional methods that worked.

Case #1: “Aztec Eagles,” Mexican Expeditionary Air Force, 1944-1945

A modest force in number that, with a minimum cost of blood and money...performed a visible activity in material effects in the Pacific Front, turning into reality the voice of Mexico in the defense of the human liberties.

—Enrique Sandoval Castarrica, *The Mexican Expeditionary Air Force*

Second Lieutenant Fausto Vega Santander sat nervously with his fellow pilots, listening to First Lieutenant Carlos Garduño Núñez explain the next morning’s mission. It would be the first combat mission for this new squadron, a four-ship formation to destroy a small pocket of Japanese resistance near Vigan on the northwest coast of Luzon, Philippines. Mountains obscured the target, an ammunition dump surrounded by guns which had harassed the US Sixth Army for a month. The tactics demanded a dive-bombing pass, something for which the Mexicans’ fast and heavy P-47D aircraft were ill-designed. In a conversation earlier that day with General George C. Kenney, commander of Far East Air Forces (FEAF), their squadron commander had volunteered the 201st Mexican Fighter Squadron for the mission. This had to work and Garduño was the right

³³ AFD Annex 3-2, 33.

³⁴ John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (Oxford: Oxford University Press, 2002), 17-34. Gaddis describes mapping the “landscape” of the past, while remaining “selective” about the stories presented.

pilot to lead it. He had spent over three years training with the US military, including with the US Navy in Douglas dive-bombers. He had flown a practice sortie that afternoon, discovering a five-second dive from twelve thousand feet would permit a bomb release at forty-five hundred feet and a safe recovery above the target. Vega and his flight mates agreed, and the mission was set.

The next morning, June 1, 1945, the four Mexicans launched from Porac Field and flew 158 miles to Vigan. With the target in sight, Garduño began his dive and immediately saw the tracer rounds of air defense artillery fire all around. Vega dove toward the target in immediate succession. The third pilot, Lieutenant Miguel Mareno Arreola, “saw a flash of light on the right side of Fausto [Vega]’s plane turning right, continuing on its dive... moments later, I saw his plane exploding as it hit the water, 300 yards from shore.”³⁵ The barrage of anti-aircraft artillery fire had hit Vega, the first and only Mexican killed in combat action during World War II. It was his twenty-first birthday.³⁶

The loss of Fausto Vega Santander represented a difficult start to the combat tour of the Aztec Eagles of the Mexican Expeditionary Air Force (MEAF), the only Mexican military unit to

³⁵ William G. Tudor, “Flight of Eagles: The Mexican Expeditionary Air Force Escuadrón 201 in World War II” (PhD diss., Texas Christian University, 1997), 226.

³⁶ This account of the death of Fausto Vega Santander is derived from Tudor, “Flight of Eagles,” 210-229; Stephen I. Schwab, “The Role of the Mexican Expeditionary Air Force in World War II: Late, Limited, but Symbolically Significant,” *Journal of Military History* 66, no. 4 (October 2002): 1115-1140, accessed January 15, 2016, <https://lumen.cgsccarl.com/login?url=http://search.proquest.com.lumen.cgsccarl.com/docview/195639371?accountid=28992>; and Anthony J. Kupferer, *No Glamour... No Glory! The Story of the 58th Fighter Group of World War II* (Dallas, TX: Taylor Publishing Company, 1989), 262. Both Tudor and Schwab explain that the cause of Vega’s death is highly contested. Tudor’s account is based on interviews and sworn statements from Carlos Garduño Núñez and Miguel Mareno Arreola, the only eye-witnesses to Vega’s death. This June 1, 1945 flight is not listed in mission reports of either the 201st Mexican Fighter Squadron or the 58th Fighter Group, as this mission occurred during the “training” phase of the Mexicans’ combat indoctrination. The only formal military account was an accident report filed by the 58th Fighter Group, which borrowed from conjecture by one Mexican pilot that Vega experienced a high-speed stall during the dive recovery. Kupferer, a historian of the 58th Fighter Group, claims Vega experienced a high-speed stall resulting from a turn at low altitude. Castarrica, a Mexican historian of the MEAF (whose Spanish-language history was used by Tudor), claims the high-speed stall was followed by two rapid rolls to the right, uncharacteristic of a P-47 in those flight parameters. For the flight training background of Carlos Garduño Núñez, see Tudor, “Flight of Eagles,” 56-60.

deploy to a theater of war. For the three hundred men of the MEAF, this entrance into battle constituted only the next chapter in a year-long saga – constantly moving from one training location to another, overcoming significant cultural and language barriers, learning in a supportive yet demanding organizational context, and training to fly modern combat aircraft. For the nation of Mexico, however, the journey had begun many years earlier.

Road to War

Mexico had a proud tradition of non-intervention derived from a painful history of war. Memories from the Mexican-American War still smarted nearly a century after General Winfield Scott's drive from Veracruz to Mexico City and the loss of large swaths of territory to the United States. During World War I, US forces returned to Mexico with a six-month occupation of Veracruz in 1914 and then General John Pershing's Punitive Expedition through northern Mexico to pursue outlaw Francisco "Pancho" Villa in 1916. Although US forces left Mexico in 1917, the episodic violence of the Mexican Revolution continued past 1930.³⁷ Not surprisingly, "during most of its national life, Mexico has been on the defensive seeking to preserve its political and economic independence against external influences," especially its northern neighbor.³⁸ The non-interventionism and self-determination of its foreign policy derive from the Estrada Doctrine, named for Genaro Estrada, Mexico's Foreign Minister during the revolution. A sense of isolationism and status quo security undergird the firm disinclination toward involvement outside its borders.³⁹ As Mexican Air Force officer José Vega Rivera explained, "the country's history

³⁷ José G. Vega Rivera, "The Mexican Expeditionary Air Force in World War II: The Organization, Training, and Operations of the 201st Squadron" (master's thesis, Air Command and Staff College, 1997), 3-4; Schwab, "Role of the Mexican Expeditionary Air Force," 211.

³⁸ Howard F. Cline, *Mexico: Revolution to Evolution, 1940-1960* (London: Oxford University Press, 1962), 301.

³⁹ *Ibid.*, 300-301; Greg Fernandez, "Mexico and Trilateral Air Defense, Is NORAD the Answer?" Strategy Research Project (Carlisle Barracks, PA: US Army War College, 2009), 5-6.

and international posture made it appear the participation of Mexican forces overseas almost impossible.”⁴⁰ The historic shift toward active participation in World War II would ensue quickly.

At the close of the 1930s, Mexico was little more than a passive spectator to rising world tensions. In 1940, as Latin American leaders gathered at the Havana Conference, Mexico moved toward belligerent neutrality.⁴¹ The summit’s resulting Declaration of Reciprocal Assistance and Cooperation prescribed an alliance for common defense against any attack from overseas (non-American) powers. It was “the first inter-American security instrument aimed specifically at such powers.”⁴² By 1941, Mexico had shifted further toward active belligerence, ready to stand with hemispheric partners against Axis aggression. For newly elected President Manuel Ávila Camacho, a unifying reformer and shrewd politician, the attack on Pearl Harbor demanded a Mexican response. In a nationally broadcast speech on December 8, 1941, he declared that Mexico and the United States were duty-bound in the “intimate collaboration that may serve to link together in solidarity the action taken by all the Americas.”⁴³ An editorial in the prominent Mexican newspaper *La Prensa* that day echoed the sentiment: “our place, in history as in geography, is with the neighbor who was at our side during our War of Independence.”⁴⁴ In the early months of 1942, the appetite for defensive action grew. A presidential speech on Pan-

⁴⁰ Vega Rivera, “Mexican Expeditionary Air Force,” 4.

⁴¹ Howard F. Cline, *The United States and Mexico* (New York: Atheneum, 1963), 265-270. In July 1940, the foreign ministers of Western hemisphere nations gathered in Havana, Cuba. The emergency meeting was called to address the fears of many Latin American nations that they would be either abandoned by their former colonial protectors, or overwhelmed by German attacks. At the Havana Conference, the United States promised security assistance throughout the hemisphere, effectively extending the Monroe Doctrine from moral opposition and economic interest to common security affairs. See J. Lloyd Mecham, *The United States and Inter-American Security, 1889-1960* (Austin, TX: University of Texas Press, 1961), 186-191.

⁴² Mecham, *United States and Inter-American Security*, 189.

⁴³ Stetson Conn and Byron Fairchild, *The Western Hemisphere: The Framework of Hemisphere Defense* (Washington, DC: US Army Chief of Military History, 1960), 331.

⁴⁴ *Ibid.*, 340.

American Day in mid-April described independence as “too important to think that others will defend it in our name.”⁴⁵ When German submarines sank two Mexican oil tankers on May 14 and May 22, 1942, killing twelve Mexican sailors, Ávila Camacho declared war on the Axis powers. While publically reaffirming that Mexicans serving in overseas combat would violate Mexico’s pacifist tradition, privately he understood that “any country without a fighting interest in the conflict would be irrelevant during post-wartime negotiations.”⁴⁶ The stage was set for increased collaboration between the US and Mexico.

The United States, for its part, had been pursuing greater engagement in Latin America since the late 1930s. The Goodwill Act of June 24, 1938, augmented by Executive Order 7964 on August 29, 1939, had both political and military objectives. The military ends were “to bring the United States Army into contact with those of the other American Republics which will encourage mutual confidence, respect and understanding, will develop a common doctrine and method in the solution of similar problems, and will permit the forces of these Republics to benefit from familiarity with the organization, training and material of our Army.”⁴⁷ For the air arm of the US military, this interaction took two forms. First, the US Army Air Forces (AAF) worked with the Civil Aeronautics Authority to train Latin American commercial airline pilots.

⁴⁵ Cline, *United States and Mexico*, 268.

⁴⁶ Dana Calvo, “The Saga of the Aztec Eagles,” *Los Angeles Times Magazine*, July 25, 2004, 2; Schwab, “Role of the Mexican Expeditionary Air Force,” 211.

⁴⁷ Gerald T. White, *Training of Foreign Nationals by the AAF, 1939-1945*, Army Air Forces Historical Studies, no. 64 (Washington, DC: Air Historical Office, August 1957, declassified September 22, 1953), 3. The Goodwill Act was designed to extend US influence into Latin America, countering German and Japanese influence. As another extension of the Monroe Doctrine, it provided educational and training opportunities at US schools for limited numbers of Latin American students. The August 1938 Executive Order directed US government executive departments to develop training plans for foreign nationals, and made the Secretary of State the focal point for all applications from prospective students. The Goodwill Act also established military missions – representatives from the US Army and Navy detailed to Latin American militaries in training and advisory roles. Mexico was the only Latin American nation never to host a military mission on its soil. See Raymond Estep, *United States Military Aid to Latin America* (Maxwell Air Force Base, AL: Air University, 1966), 43.

As the nascent Latin American airlines were often staffed by German pilots, the United States intended to train indigenous aircrew in hopes of eliminating Axis influence in the hemisphere's aviation industries. Second, and more significantly, the AAF instituted training programs in order to strengthen the air forces of Latin America. Backed by congressional legislation of October 18, 1941, the AAF conducted flight training for foreign students in US military aviation schools.⁴⁸ This was a natural extension of its history, as AAF historian Gerald T. White observed after the war: "training the air personnel of other nations...had been considered since its inception to be mutually beneficial both to the participating nations and to the United States... [The] general benefits to both parties became much more apparent with the approach to war."⁴⁹

The Lend-Lease Act of March 11, 1941 further supplemented the Goodwill Act in defining US military assistance to its hemispheric allies. Although Lend-Lease broadly provided a vehicle for the transfer of defense articles and information (such as training) for the use of such articles, the US policy for Lend-Lease aid to Latin America restricted grants to "military equipment and services, and these only for purposes of hemisphere defense."⁵⁰ A Joint Chiefs of Staff policy memorandum in May 1945 noted that Lend-Lease financed primary flight training and ground instruction, while the Goodwill Act permitted other flight training programs, at the cost of the AAF and without reimbursement from Latin American allies.⁵¹ Through the war, Mexico was one of just four Western hemisphere nations to receive not only training aircraft but also tactical aircraft, and one of only two to receive tactical flight training. By December 1946, it

⁴⁸ White, *Training of Foreign Nationals*, 2, 17-19; Mecham, *United States and Inter-American Security*, 201.

⁴⁹ White, *Training of Foreign Nationals*, 1.

⁵⁰ Conn and Fairchild, *Western Hemisphere*, 234; Mecham, *United States and Inter-American Security*, 217; White, *Training of Foreign Nationals*, 4.

⁵¹ Joint Chiefs of Staff, JCS 1343, "Policy for U.S. Training Programs for Foreign Nationals," Report by the Joint Staff Planners and Joint Logistics Committee, May 10, 1945, 6.

had received \$39 million in Lend-Lease aid, including \$31 million in goods and services from the War Department. The 305 aircraft it received accounted for \$14.6 million of that total.⁵²

The military cooperation between the US and Mexico received a formal structure in the establishment of the Joint Mexican-United States Defense Commission (JMUSDC). US Secretary of State Cordell Hull first floated the idea for a joint planning committee in November 1940. Though receptive, Mexican President Ávila Camacho asked to delay any formal arrangement, fearing his political opposition amid rumors that he had made territorial concessions to the United States in exchange for political support – an understandably sensitive topic given past Mexican-American history.⁵³ It took more than a year for the domestic political pressure to recede and the JMUSDC finally took shape in January 1942 with the mandate to administer the military portion of Lend-Lease and coordinate any planning and military action for joint coastal defense. By early 1942, it had secured reciprocal overflight rights and established US Army and Navy radar stations in Mexico. By June 1942, it facilitated a two-week training course in the United States for a small group of Mexican pilots, one of whom put his training to immediate use upon return to Mexico when he found and damaged a German submarine in the Gulf of Mexico.⁵⁴ According to Vega Rivera, this bilateral cooperation, “based on mutual respect, was a completely new relationship, in contrast to the complicated and tense situation during World War I.”⁵⁵ The leap from

⁵² Conn and Fairchild, *Western Hemisphere*, 227, 353-356; Cline, *United States and Mexico*, 277. According to Conn and Fairchild, the other nations to receive tactical aircraft were Brazil, Peru and Chile. Cline, a noted historian of US-Mexico relations, reports that Mexico received \$18 million in military aid through Lend-Lease. Conn and Fairchild claim that amount to be \$31 million, as quoted here. The Conn and Fairchild accounting seems more reliable due to the specificity of their numbers and the depth of resources used to support the official US Army histories of World War II, including that by Conn and Fairchild.

⁵³ United States, *Foreign Relations of the United States, 1940: V, The American Republics* (Washington, DC: Government Printing Office, 1961), 143-145.

⁵⁴ Jorge I. Domínguez and Rafael Fernández Castro, *The United States and Mexico: Between Partnership and Conflict*, 2nd ed. (New York: Routledge, 2009), 39; Estep, *United States Military Aid*, 208; Vega Rivera, “Mexican Expeditionary Air Force,” 5-6.

⁵⁵ Vega Rivera, “Mexican Expeditionary Air Force,” 5.

coordination and cooperation to combat, however, would require a delicate balancing act by two presidents both concerned with their domestic audiences.

Mexican Foreign Minister Ezéquiél Padilla first raised the question of participation in overseas combat by the Mexican armed forces. In a July 1943 discussion with US Ambassador to Mexico George S. Messersmith, Padilla claimed to have the support of Mexican army leadership. When relaying the message to Under Secretary of State Sumner Welles, Messersmith proposed, “the most practical way would be to have Mexican pilots as a Mexican escadrille participate at the front.”⁵⁶ An assistant air attaché in Messersmith’s embassy, Captain Paul B. Miller, may have had the idea to use a combat fighter squadron first – his widow claimed he brought the suggestion to the Ambassador in summer 1943.⁵⁷ Miller would later play a key role in the development of this Mexican squadron. Regardless of the idea’s originator, using an aerial unit overseas made sense: it would best concentrate Mexico’s limited military power to achieve direct operational effects, it was more suited than ground troops to pursue a retreating enemy force in any theater of operations, and it might reduce the possibility of Mexican casualties. Furthermore, there was a general lack of confidence from US Army leaders, especially those in the JMUSDC, in the capability and organization of the Mexican ground forces.⁵⁸ Ambassador Messersmith actively lobbied US leaders in Washington, including President Franklin D. Roosevelt, while trying to keep the issue out of the purview of the more pessimistic JMUSDC.

In Mexico, President Ávila Camacho worked through the summer and fall of 1943 to build domestic support for sending airmen to combat. Messersmith assessed that the Mexican president was ready to leave behind old tensions, although some of his countrymen demonstrated

⁵⁶ United States, *Foreign Relations of the United States, 1943: VI, The American Republics* (Washington, DC: Government Printing Office, 1965), 404-405.

⁵⁷ Tudor, “Flight of Eagles,” 50-51.

⁵⁸ Vega Rivera, “Mexican Expeditionary Air Force,” 10; Schwab, “Role of the Mexican Expeditionary Air Force,” 213.

less inclination toward close collaboration with the United States.⁵⁹ The Mexican Army strongly opposed using an air squadron, as the Mexican military attaché to Washington claimed “Mexican Air Force pilots were undisciplined and untrained and that the service had no knowledge of supply.”⁶⁰ He suggested, instead, the deployment of fifty thousand soldiers from the Mexican cavalry and mechanized forces – an unpalatable idea for either political or military leadership in the United States. Roosevelt, for whom size mattered less than symbolism, wrote to US Army Chief of Staff George C. Marshall in September 1943 that he wanted to “think up some method of using even a token force of Mexicans at some point outside of Mexico.”⁶¹ By early 1944, he was ready to make a commitment to the Mexican government.

Roosevelt summoned Messersmith for a decisive Oval Office conversation on January 31, 1944. The following week, Messersmith planned specific details with General Marshall and General Henry H. Arnold, commanding general of the AAF. He returned to Mexico City with the highest possible endorsements for the idea of a Mexican fighter squadron: two four-star generals and the President of the United States.⁶² Now Ávila Camacho and Padilla got to work finalizing their own support base for the plan. The Mexican Air Force, only formally designated a separate service in early February 1944, had just 425 officers, half of which were pilots.⁶³ It boasted merely 124 aircraft, all either trainers or dive-bombers. To the growing public impression that this would become “Señor Padilla’s war,” Ávila Camacho held a Mexico City airshow in February.⁶⁴

⁵⁹ *FRUS, 1943: VI*, 409-415; Tudor, “Flight of Eagles,” 22.

⁶⁰ Tudor, “Flight of Eagles,” 40.

⁶¹ *Ibid.*, 32.

⁶² Tudor, “Flight of Eagles,” 34-36.

⁶³ Vega Rivera, “Mexican Expeditionary Air Force,” 8.

⁶⁴ United States, *Foreign Relations of the United States, 1944: VII, The American Republics* (Washington, DC: Government Printing Office, 1967), 1182-1184; Mecham, *United States and Inter-American Security*, 227

After hundreds of thousands of spectators watched the nascent Mexican Air Force's impressive flight demonstration, the President had secured much-needed public support. The scheme remained a secret, though, even from Mexican Air Force commanding general Gustavo Salinas who, along with the JMUSDC, was interested in developing a combined Latin American expeditionary air force – something not in the plans of Roosevelt and Ávila Camacho.⁶⁵ On March 14, 1944, the Mexican president formally agreed to the American proposal to form a Mexican fighter squadron. By early July, coordination had worked through the JMUSDC to develop a treaty directing the training and organization of such a force in the United States. The MEAF would consist of forty-four officers and 249 enlisted airmen, receiving the same training and held to the same standards as an AAF fighter squadron. It would receive twenty-five operational aircraft, with another seventeen in reserve as replacement aircraft. Lend-Lease would finance the aircraft transfers and the Goodwill Act would cover the cost of training.⁶⁶

Only one question remained unanswered: the official assignment of the Mexican airmen to an active combat theater. By December 1944, as the MEAF trained in the United States, Ávila Camacho asked Roosevelt to assign the MEAF to the South West Pacific Area (SWPA). Practically, he reasoned, the squadron could do more in the Pacific than in an already-saturated European theater. Sentimentally, Mexico valued its historical ties with the people of the Philippines. And personally, Ávila Camacho wanted his men to serve under his friend General Douglas MacArthur, the commander of Allied Forces in the SWPA. On December 29, 1944, Ávila Camacho won two victories. MacArthur agreed to the request to host the MEAF, and the Mexican Senate formally approved the assignment of Mexican forces to overseas combat.⁶⁷

⁶⁵ *FRUS, 1943: VI*, 405; White, *Training of Foreign Nationals*, 16-17; Schwab, "Role of the Mexican Expeditionary Air Force," 213.

⁶⁶ *FRUS, 1944: VII*, 1189; Tudor, "Flight of Eagles," 48-49; Vega Rivera, "Mexican Expeditionary Air Force," 9-13.

⁶⁷ *FRUS, 1944: VII*, 1196-1197; Tudor, "Flight of Eagles," 118.

The road to war for Mexico took years of domestic and bilateral political maneuvering, institutional action, fiscal legislation, and policy changes to make the MEAF a reality. To turn this new organization into a fighting force would take another eleven months.

The Training

President Ávila Camacho's personal involvement continued in the forming of the MEAF. From April to June 1944, he directed the recruitment of 264 ground personnel and thirty-six pilot officers. The pilots were hand-selected based on two primary factors: basic knowledge of English and prior flight training and experience.⁶⁸ Two-thirds of them had trained previously in the United States, with either the AAF or the Navy. Several were experienced senior pilots, some with as much as three thousand flight hours.⁶⁹ By mid-summer, the MEAF was ready for training. Three hundred Mexican airmen crossed the Rio Grande River to much fanfare on July 25, 1944, inprocessing at Randolph Field in San Antonio, Texas before separating to individual training centers. Maintenance airmen went to Long Island, New York to learn P-47 systems at the Republic Aircraft facility in Farmingdale, and the pilots moved to Foster Field, Victoria, Texas.⁷⁰

The ten weeks of intensive flight training at Foster Field introduced the Mexican pilots to the AAF system of instruction. They received sixty-four hours in the AT-6, the advanced trainer workhorse of the AAF. Instruction focused on navigation and instruments, acrobatics, formation flying, and night flying. As with all other foreign training conducted by Air Training Command (ATC) during the war, this followed "the basic structure of the AAF program governing the particular type of training, and was given under AAF direction and supervision."⁷¹ In establishing

⁶⁸ Tudor, "Flight of Eagles," 46, 55.

⁶⁹ Vega Rivera, "Mexican Expeditionary Air Force," 14; Schwab, "Role of the Mexican Expeditionary Air Force," 214.

⁷⁰ Vega Rivera, "Mexican Expeditionary Air Force," 15.

⁷¹ White, *Training of Foreign Nationals*, 8.

these foreign training programs, the AAF Adjutant General wrote in 1939 that “students trained under the [Goodwill] act of 24 June 1938 were to be judged by the standards of training applicable to our own personnel,” with the view of enabling effective integration to combat operations.⁷² For the Mexican pilots, even those with previous basic flight training in the United States, this transition to advanced flying proved difficult. Their trainers at Foster Field, all experienced ATC instructor pilots, assessed many of the student pilots as especially weak in judgment, technique, and coordination during the AT-6 phase.⁷³ By September, though, the MEAF pilots had progressed to the P-40, receiving ten hours of fighter transition lessons and seventeen hours of basic gunnery training. Despite the instructional challenges, all but two of the original thirty-six pilots graduated on October 16, 1944, ready to reunite with the rest of the MEAF for unit training in the P-47 at Pocatello Army Air Base, Idaho.⁷⁴

Renowned for its size, speed, and range, the P-47D Thunderbolt first saw combat in Europe in early 1943. Fifth Air Force Commander Major General Ennis C. Whitehead, for whom the Mexican pilots would later work in the SWPA, admired the P-47 as “the best fighter which our country possesses,” a durable fighter-bomber capable of both high speed and high altitude.⁷⁵ Designed originally as an air interceptor and then modified for air-to-ground missions such as close air support and air interdiction, it carried two thousand pounds of bombs and eight .50-caliber machine gun pods. One Thunderbolt pilot remembered the fourteen-thousand-pound

⁷² White, *Training of Foreign Nationals*, 65-66; Vega Rivera, “Mexican Expeditionary Air Force,” 15.

⁷³ Jay E. Hines, *History of Foreign Training in ATC, 1941-1976*, ATC Historical Monograph (Randolph Air Force Base, TX: Air Training Command Office of History, 1977), 29.

⁷⁴ Tudor, “Flight of Eagles,” 72-75.

⁷⁵ Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 5, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (Chicago: University of Chicago Press, 1953), 331.

aircraft as “no place for the faint-hearted.”⁷⁶ To master this war machine, the pilots of the MEAF arrived at Pocatello for a 120-hour training program consisting of 107 missions over the next four months. The P-47 syllabus consisted of five phases: transition (navigation, formation, and acrobatics), pre-gunnery (instruments, low altitude training, night formation, and strafing), gunnery (aerial and ground), bombing (level- and dive-bombing), and tactics (high-altitude combat and theater training).⁷⁷

Teaching the new fighter pilots were the instructors assigned to Section “T”. Organized by Second Air Force in August specifically for this training mission, the unit fell under the command of Captain Paul Miller, the former air attaché who had so strongly advocated for a Mexican fighter squadron. Perhaps due to his dedication, or perhaps because he so wanted the training to work, Miller believed his students to be “considerably above average... [and their] formation flying ranged from excellent to superior.”⁷⁸ In his dogged pursuit of their success, Miller may have pushed too far. He frequently disagreed with Colonel Antonio Cárdenas Rodríguez, the senior Mexican officer and MEAF commander, creating personal and professional barriers. He demanded excellence from his students, often using the usual American fighter pilot techniques of harsh criticism and directive instruction with the Mexican pilots. By late November, the harsh winter weather of Idaho matched the rigidity of the training program, forcing Section “T” and the MEAF to move back to Texas.

At Majors Field, outside Greenville, Texas, the now-designated 201st Mexican Fighter Squadron completed the rigorous P-47 training. As Captain Miller’s strained relationship with

⁷⁶ Marvin Bledsoe, *Thunderbolt: Memoirs of a World War II Fighter Pilot* (New York: Van Nostrand Reinhold Company, 1982), 21; Tudor, “Flight of Eagles,” 92-93; Vega Rivera, “Mexican Expeditionary Air Force,” 22.

⁷⁷ United States Air Force, Second Air Force, Historical Section, *History of 201st Mexican Fighter Squadron, August 1944 through March 1945* (Maxwell Air Force Base, AL: Air Force Historical Research Agency); Vega Rivera, “Mexican Expeditionary Air Force,” 17, 46-47; Tudor, “Flight of Eagles,” 94.

⁷⁸ USAF Second Air Force, *History of 201st*, 13-15.

Colonel Cárdenas finally gave way, Lieutenant Colonel Arthur W. Kellond replaced the young Section “I” commander in late January 1945. Although unable to speak Spanish, Kellond brought veteran credentials and a comparatively gentle demeanor that quickly changed the tenor of the unit. Under his leadership, “the quality of the training program improved dramatically...primarily because the teaching staff consisted of eighteen Air Force combat veterans brought back from the war fronts.”⁷⁹ This experienced cadre guided the MEAF pilots through the final critical phases of gunnery, bombing, and tactics; their efforts seemed successful. The official FEAF history of the 201st, written just after the war, noted that the squadron completed its training in March 1945 “with a record slightly better than that of the average United States Fighter Squadron.”⁸⁰

Culture

Throughout the eight months of training in the United States, the two major obstacles for Mexican pilots were adaptability to AAF training standards and language and cultural barriers. The instructional ability and sheer willpower of the Section “I” team overcame the former. The latter obstacle posed greater challenge, not unique to the MEAF as many foreign air forces had undergone flight training in the United States. In the judgment of ATC,

No greater and at the same time more unnecessary reason for training failures existed among foreign students during the war period than an inadequate knowledge of English. The wastefulness and costliness of attempting to train in spite of a language barrier [had to] be eliminated.⁸¹

The instructors at Foster Field understood well this constraint and intentionally sought to mitigate the language and cultural barriers. Fifteen instructor-interpreters detailed to the AT-6 and P-40

⁷⁹ Tudor, “Flight of Eagles,” 108; United States Air Force, Second Air Force, 72nd Fighter Wing, *History of the 201st Mexican Fighter Squadron (Majors Field), 6 August 1944 to 1 February 1945* (Maxwell Air Force Base, AL: Air Force Historical Research Agency).

⁸⁰ United States Air Force, Far East Air Forces, *201st Mexican Fighter Squadron, October 19, 1945* (Maxwell Air Force Base, AL: Air Force Historical Research Agency).

⁸¹ White, *Training of Foreign Nationals*, 101.

training lived in the barracks with Mexican students. A cultural education brochure published by ATC was translated into Spanish and distributed to MEAF airmen upon their arrival in the United States. The student pilots received dedicated English instruction from attractive young women, deemed more effective tutors than older men. And unlike concurrent AAF flight training programs with French and Chinese airmen, the Mexicans' textbooks and technical manuals at Foster Field were kept in English, to encourage language training.⁸²

Captain Miller's team of twelve veteran combat pilots, three ground officers, and twenty enlisted instructors at Pocatello had purportedly been selected for both technical knowledge and bilingual ability. Some of the instructors, however, had only taken one Spanish class in high school; besides Miller, only one instructor actually spoke fluent Spanish. This language difference immediately presented instructional barriers, especially in on-the-job training such as aircraft maintenance and inflight instruction.⁸³ As one Section "T" instructor recalled, "sometimes the communication procedure in flight was shaking the stick and a few words in Spanish (usually loud in dangerous situations)."⁸⁴ To bridge the gap more intentionally, the Pocatello cadre offered voluntary English classes for both officer and enlisted trainees. Miller directed mandatory Spanish classes for his American instructors, allowing them to develop at least conversational skills – a marginally effective, even if well meant, attempt. During flight operations, an English-speaking Mexican pilot stood watch in the air traffic control tower, to assist during emergencies for airborne pilots whose English remained weak. Unlike at Foster Field, the Pocatello instructors translated maintenance and engineering manuals into Spanish.⁸⁵

⁸² Hines, *History of Foreign Training in ATC*, 29-30; USAF Second Air Force, *History of 201st*.

⁸³ Tudor, "Flight of Eagles," 85-86.

⁸⁴ Vega Rivera, "Mexican Expeditionary Air Force," 26.

⁸⁵ Tudor, "Flight of Eagles," 98-99.

At Majors Field, cultural prejudices exacerbated the language challenge. Greenville, Texas, called itself “the blackest land and the whitest people,” in an area of the United States with perhaps the strongest bias against Latin Americans.⁸⁶ Racial tension contributed to one Greenville restaurant refusing service to MEAF officers and to the great difficulty experienced by the wives of the Mexican pilots in finding housing. To alleviate the friction, later training for replacement Mexican pilots and ground personnel moved to Dothan, Alabama in June 1945, while the MEAF fought in the SWPA. In the meantime, the experienced instructors at Majors Field again worked to overcome some of these barriers. As at Foster Field and Pocatello, the team used instructor- interpreters, translators, and English classes to aid the Mexican student pilots. They again offered cultural training and translated technical materials into Spanish. Outside the classroom, much of the instruction continued to rely on demonstration. Most significantly, they lengthened the P-47 training timeline from twelve to nearly twenty weeks, to allow for slower progress due to the language difference.⁸⁷ At all three training locations, the efforts to mitigate language and cultural barriers reflected a deep institutional commitment by the AAF to provide the most effective training for the 201st Mexican Fighter Squadron.

Commitment

The AAF began training foreign air forces immediately after the passage of the Goodwill Act of 1938. By December 1945, over twenty thousand airmen from thirty-one nations had received either flying or technical training from the AAF, including nearly fifteen thousand pilots. While the largest portions of this instruction went to the major recipients of Lend-Lease aid – Britain, France, and China – at least sixteen hundred wartime graduates were Latin American students. The AAF divided its major foreign training programs between the regional components

⁸⁶ Tudor, “Flight of Eagles,” 109; USAF Second Air Force, *History of 201st*.

⁸⁷ White, *Training of Foreign Nationals*, 67-75.

of ATC. The British and French trained mostly in the southeast United States, under Eastern Flying Training Command; Chinese airmen flew in Arizona and southern California, with Western Flying Training Command; and Latin American air forces went to Central Flying Training Command, primarily Texas.⁸⁸ In an unpublished memorandum to the US Army general staff in July 1942, the Latin American subsection of ATC proposed moving all Latin American flying training to locations outside the United States, with the intention of avoiding the already-crowded training apparatus of the AAF. Leaders within ATC quickly suppressed the idea, though:

Granting that it handicaps our training program, the advantage of training Latin Americans in this country is worth a considerable amount of effort on our part. The importance of Latin American good will cannot be overestimated... This cannot be done effectively by any other means.⁸⁹

Training partner nation air forces like that of Mexico quickly became a core responsibility of the AAF's training establishment, which developed a robust network of staff and liaison officers at all levels from the unit up through ATC to headquarters AAF.⁹⁰ Air Force historian Jay Hines, in an accounting of foreign flight training, described this as "one of ATC's most important missions... [on which] depended sensitive matters of international diplomacy and the future good will of many foreign leaders."⁹¹

For the Mexican Air Force, this training of the MEAF would form the closest Mexican-American military cooperation of the Twentieth Century.⁹² Although over fifty Mexican airmen

⁸⁸ Ibid., 5-7, 22, 97.

⁸⁹ White, *Training of Foreign Nationals*, 91-92. Conversations between Messersmith, Hull, and Mexican government officials echoed a similar question of whether it would be prudent to train the MEAF in Mexico. AAF analysis indicated a training program outside the United States would require critical AAF maintenance equipment and over 550 airmen to oversee the training, and would further strain US training bases. Messersmith concluded that "it would be impossible to train a Mexican squadron in Mexico." *FRUS 1944: VII*, 1188.

⁹⁰ White, *Training of Foreign Nationals*, 54-57.

⁹¹ Hines, *History of Foreign Training in ATC*, 2.

⁹² Schwab, "Role of the Mexican Expeditionary Air Force," 212.

had already trained in the United States between 1942 and mid-1944, the training program for the 201st Mexican Fighter Squadron received much greater institutional support. In addition to benefitting from the aforementioned combat experience and teaching ability of Central Flying Training Command instructors, the MEAF's experience shaped future training programs. Upon the completion of AT-6 and P-40 flying at Foster Field, the training wing commander engaged with Captain Radames Gaxiola Andrade, the 201st squadron commander. Gaxiola recommended that the AAF slow down training to permit higher absorption rates by Mexican students and that training programs use Mexican instructors, especially pilots, to aid in technical training. Leaders from ATC began to incorporate such changes in the training of 201st replacement pilots as early as spring 1945.⁹³ Follow-on pilots were divided into two groups: fighter training, for English-speaking Mexican pilots with earlier basic flight training experience at AAF schools, and primary training, for new student pilots from Mexico.⁹⁴

Contextual support for training Mexican pilots demonstrated the singular importance of this military partnership, even to the point that the US Joint Chiefs of Staff recognized the significance of the AAF's training. In a policy memorandum dated May 10, 1945, Joint Staff planners proposed an interim post-war policy to curtail training programs for foreign air forces upon the cessation of hostilities. The only programs that would continue after the war were those that, like the MEAF training, "promote Western Hemisphere solidarity."⁹⁵ The US Army history of World War II credits the wartime cooperation between the United States and Mexico to "the commendable combat record of the Mexican 201st Fighter Squadron on Luzon."⁹⁶ After eight months of training, the MEAF would prove itself in the Philippines.

⁹³ USAF Second Air Force, *History of 201st*; Tudor, "Flight of Eagles," 76-77.

⁹⁴ Tudor, "Flight of Eagles," 127-128; White, *Training of Foreign Nationals*, 175-179.

⁹⁵ JCS 1343, "Policy for U.S. Training Programs," 10.

⁹⁶ Conn and Fairchild, *Western Hemisphere*, 363.

Combat

In May 1945, the Philippine island of Luzon comprised the northern edge of the Allied forces in the SWPA. The US Sixth Army continued to destroy remnants of Japanese resistance from Luzon, in preparation for a northward push on to Formosa, Okinawa, and the main islands of Japan later that summer. Major General Whitehead's Fifth Air Force, under General Kenney's FEAF, provided direct support to the ground troops of Sixth Army and continued neutralization of enemy air bases along the theater's northern edge.⁹⁷ General Kenney saw his command as a tactical air force, best designed for isolating the battlefield from the enemy force and then directly cooperating with ground forces. The fighters of Fifth Air Force provided the vast majority of ground support sorties on Luzon, servicing ground-party-nominated targets via either diving passes or low altitude weapons deliveries from level flight. Kenney had "developed a system of close air support for the theater that was, by 1945, probably as effective as any system could be under those conditions."⁹⁸ When the 201st Mexican Fighter Squadron arrived in Luzon on May 1, 1945, they immediately impressed Kenney with their appearance and eagerness. This was a squadron, he noted, ready to get to work as soon as possible.⁹⁹ Kenney assigned the Mexicans to the 58th Fighter Group, a war-hardened P-47 unit at Porac Field, near Clark Field in central Luzon. Having started as escort fighters in New Guinea in early 1944, the group moved to the Philippines later that year to provide convoy patrol, close air support, and sweep missions. It had earned a distinguished unit citation for strafing the Japanese navy in late December 1944.¹⁰⁰ By

⁹⁷ Craven and Cate, *Army Air Forces in WWII*, 449.

⁹⁸ Joe Gray Taylor, "American Experience in the Southwest Pacific," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 325-326, 333.

⁹⁹ George C. Kenney, *General Kenney Reports: A Personal History of the Pacific War* (New York: Duell, Sloan, and Pearce, 1949), 544.

¹⁰⁰ Maurer Maurer, ed., *Air Force Combat Units of World War II* (Washington, DC: Office of Air Force History, 1983), 121-122.

the time the 201st arrived, the 58th Fighter Group had mastered the art of dive-bombing – the aerial tactic by which an aircraft increased its dive angle in relation to the target, to deliver accurate high-speed munitions. Though highly effective, this technique bore inherent danger since dive angles that were too steep compromised safety. As Vega Rivera wondered, “it must have been difficult for new pilots to judge the difference.”¹⁰¹ Lieutenant Fausto Vega Santander may not have judged it correctly; for the rest of his squadron, the well-structured transition to combat prepared them for success.

Advanced combat training for the 201st Mexican Fighter Squadron began at Porac Field a week after arrival. Following ground academics and policy briefings, the Mexicans were flying combat training missions by mid-May. More combat than training, these sorties were flown alongside pilots of the 58th Fighter Group to introduce the 201st pilots to theater-specific threats and tactics. Fighting a language barrier even in combat, the AAF instructors at Porac relied on visual aids and interpreters to communicate critical mission details to their Mexican wingmen.¹⁰² The battle-tested 58th pilots understandably resented these green pilots, even at times questioning their pre-combat training. One pilot of the 310th Fighter Squadron, who flew with and trained the 201st, observed that “coming into training [at Porac], Mexico’s finest aviators were rusty by US Air Force standards.”¹⁰³ The commander of the 310th, however, praised the Mexican squadron during its combat transition: “They were super pilots for a super plane. Their ability...to accurately drop 1,000 pound bombs in difficult conditions was the stamp that made them legends.”¹⁰⁴ Even the greenest of pilots grew into respected combat aviators.

¹⁰¹ Vega Rivera, “Mexican Expeditionary Air Force,” 26.

¹⁰² United States Air Force, Fifth Air Force, V Fighter Command, *History of the 58th Fighter Group, Chapter 19, 1 May 1945 to 31 May 1945* (Maxwell Air Force Base, AL: Air Force Historical Research Agency); Kupferer, *No Glamour... No Glory!*, 255.

¹⁰³ Tudor, “Flight of Eagles,” 181.

¹⁰⁴ *Ibid.*, 182.

The Aztec Eagles, as the 201st Fighter Squadron had become known, flew their first official combat mission on June 4, 1945. Eight aircraft launched early that morning in support of Sixth Army's 37th Division, during the battle for Aritao in central Luzon. Ground controllers recorded the bombing accuracy as good to very good, a resounding success for the Mexican squadron.¹⁰⁵ Over the next month, 201st pilots flew fifty-three close air support missions over Luzon, forty-five of which controllers deemed effective. In the first week of July, the missions shifted to counter-air fighter sweep and long-range air interdiction sorties over Formosa. After non-combat missions ferrying aircraft between SWPA islands during July, the 201st flew its last combat mission on August 10, 1945. Every available squadron aircraft supported a twelve-hour naval convoy escort near Okinawa on the very day of Japan's surrender, a fitting end to the war for the MEAF.¹⁰⁶ Though brief, the combat record of the MEAF contributed effective support to a vital ground campaign on Luzon. According to the FEAF history of the 201st, "their record compares favorably with that of the veteran pilots of the 58th Group."¹⁰⁷ Yet despite combat effectiveness, the Mexican squadron remained at Porac when the rest of the group moved to Okinawa in July.

The loss of five pilots during combat raised questions about the readiness and leadership of the MEAF. While Fausto Vega Santander was the only combat action death, the other four losses more seriously affected the squadron during its brief combat tour. Four days after Vega, the squadron operations officer died in a test-flight accident right after takeoff. Later in July, three

¹⁰⁵ Tudor, "Flight of Eagles," 186-187.

¹⁰⁶ United States Air Force, Fifth Air Force, V Fighter Command, 58th Fighter Group, 201st Mexican Fighter Squadron, *Final Mission Reports, June-July 1945*, Microfilm roll AO768, frame 1772 through 1820 (Maxwell Air Force Base, AL: Air Force Historical Research Agency); Tudor, "Flight of Eagles," 305-360. Tudor compiled the mission reports of the 201st, as recorded both by the 201st itself and by the 58th Fighter Group.

¹⁰⁷ USAF FEAF, *201st Mexican Fighter Squadron*; Craven and Cate, *Army Air Forces in WWII*, 331.

more senior pilots crashed during ferry flights due to low fuel and weather complications.¹⁰⁸ By late June, AAF leaders had already begun raising concerns about the Mexican squadron. Former Section “T” commander Lieutenant Colonel Kellond, having deployed to the Philippines as a liaison officer to the MEAF, wrote a report to General Kenney. As evidence for poor operational performance, Kellond cited the pilots’ deaths, other non-combat losses due to illness and injury, and various accidents that caused the loss of fourteen Mexican aircraft in the first month of combat service. Kenney forwarded Kellond’s report to AAF commander General Arnold, adding his own concerns for what Fifth Air Force leaders perceived as ineffective MEAF leadership – that Colonel Cárdenas, the MEAF commander, too frequently intervened in the operations of Captain Gaxiola, the 201st squadron commander.¹⁰⁹ In the end, a combination of operational attrition rate and leadership problems likely prevented the MEAF from moving to Okinawa with the rest of the 58th Fighter Group. As Kenney’s retrospective report to Arnold in September lamented, “the effective strength of this unit has been reduced to twenty-three active pilots... [and] there are only two who can be called satisfactory leaders, a fact which in itself has probably been the most important cause for the marked decline in the efficiency of this organization.”¹¹⁰ Given the challenge of joining a veteran flying group in an active combat theater, though, the Aztec Eagles represented themselves and their country well. The most balanced evaluation of the combat record of the MEAF comes from the FEAF history of the 201st:

In view of the fact that the squadron represented picked men, perhaps a higher level [of success] might have been expected. On the other hand, considering the language barrier and the relatively short operational training experience, their record is nothing to apologize for, particularly when it is remembered that the ground support techniques used by the Fifth Fighter Command on Luzon were the development of two long years of experience and had reached a height of efficiency and effectiveness.¹¹¹

¹⁰⁸ Tudor, “Flight of Eagles,” 187-192.

¹⁰⁹ Ibid., 146, 251-259; Vega Rivera, “Mexican Expeditionary Air Force,” 11-13.

¹¹⁰ Schwab, “Role of the Mexican Expeditionary Air Force,” 217.

¹¹¹ USAF FEAF, *201st Mexican Fighter Squadron*, 5-6.

The three hundred men of the MEAF had much for which to be proud. Perhaps their most significant contributions lie not in their combat record, but in the symbolic power of this historic bilateral cooperation.

Their Own Air Force

The Aztec Eagles returned to Mexico in November 1945, arriving home to much fanfare, just as they had left sixteen months earlier. While the expeditionary team formally disbanded by the end of 1945, the impacts of this unique experience lingered for years. Many 201st pilots became senior leaders in the Mexican Air Force. Five of them later served as personal pilots for the President of Mexico. Air training centers in Mexico reorganized to emulate the AAF schools experienced by the MEAF airmen. The Mexican Air Force modernized from an outdated inventory of training aircraft to a modern, albeit small, combat force.¹¹² The training experience of the MEAF redefined relations between the militaries of the United States and Mexico, building a rapport based on cooperation, trust, and shared commitment. For its combat service, Mexico became a charter member of the United Nations and earned a seat on the first Security Council.¹¹³

Overcoming cultural and language barriers to train for combat had not been an easy road for the Aztec Eagles. Their success owes in large part to the contextual support they received both in training and in combat – commitment at the highest levels of both governments and militaries, a dense network of liaison assistance from ATC, structured and thorough training programs, and dedicated and intensive combat instruction. Taken together, this system represented the high point of Air Force foreign training programs. With an eye to the future, historian Gerald White called for even better operational planning after the war:

¹¹² Graham H. Turbiville, Jr., “U.S. Military Engagement with Mexico: Uneasy Past and Challenging Future,” JSOU Report 10-2 (Hurlburt Field, FL: Joint Special Operations University Press, 2010), 6-7.

¹¹³ Vega Rivera, “Mexican Expeditionary Air Force,” 38-39.

If foreign training of air personnel is to yield these benefits to the maximum both to the nation and to the AAF, it will be necessary for this training to be more carefully planned and executed than it was during the hectic period of war. There must be less improvisation and more foresight, less seeking to solve problems after they have arisen and more avoidance of them through careful planning.¹¹⁴

Unfortunately, White's appeal failed to matriculate. Following World War II, foreign training became more improvised, less structured, and more reactionary. In the next major war for the United States, the new USAF would need to relearn many of these lessons.

Case #2: "Bout One," Republic of Korea Air Force, 1950-1951

Training the ROK pilots in combat was probably our most original contribution to the art of warfare.

— Colonel Dean E. Hess, *Battle Hymn*

Colonel Lee Gun-Suk saw the tank column from fourteen hundred feet above the ground. This should have been an easy target. After all, he had been flying for years. In the early days of WWII, he learned to drop handmade bombs out the window of his AT-6, a trainer aircraft converted for combat. Later, flying for the Japanese, he shot down over twenty American and Australian aircraft from his Zero. Lee represented the finest of South Korean pilots, a combat hero and natural leader in his nation's small air force. Now fighting to defend his homeland from communist advances, he had been given a modern American plane to fly – the faster, stronger, and more lethal F-51 Mustang. Along with the new plane had come ten American instructor pilots, a bilateral training project called Bout One. How much could they really teach him, an experienced aviator?

Lee rolled the F-51 onto its back and pulled on the stick to dive inverted toward the tanks in a familiar split-S maneuver he had done so many times in the Zero. But the Mustang, a heavier plane, would need another six hundred feet to complete the turn successfully. Colonel Lee dove

¹¹⁴ White, *Training of Foreign Nationals*, 99.

right into the ground. The Bout One commander, USAF Major Dean E. Hess, remembered it as “a needless loss of both a plane and an expert pilot... it must not happen again.”¹¹⁵ Lee’s two wingmen returned to their base at Taegu, so numb with shock it was understandable “they refused to fly any more combat missions after watching their commander go in on the tank.”¹¹⁶ Of the cohort of ten original Korean pilots in Bout One, only five remained. Hess now had to cross language and cultural barriers, overcome organizational and logistical obstacles, and mitigate the risks of training in combat, to build this nascent air force into a combat squadron credible and capable for its nation’s self-defense.¹¹⁷

Road to War

In the years following WWII, western and communist powers vied for control of the Korean peninsula. The United States accepted Japan’s August 1945 surrender south of the thirty-eighth parallel; the Soviet Union accepted the surrender to the north. Both countries moved forces onto the peninsula in the ensuing months and spent two years in unfruitful negotiations to unify Korea. By late 1948, after the establishment of the south’s Republic of Korea (ROK) and the north’s Democratic People’s Republic of Korea (DPRK), both the United States and the Soviet Union withdrew their forces, leaving in place only skeletal advisory efforts.¹¹⁸ The USAF’s

¹¹⁵ Dean E. Hess, *Battle Hymn* (New York: McGraw-Hill, 1956), 84.

¹¹⁶ Frank E. Merritt, “Oral History Interview, December 8, 1977,” US Air Force Oral History Program, Microfilm roll 33545, frame 380 (Maxwell Air Force Base, AL: Air Force Historical Research Agency), 31.

¹¹⁷ This account of the death of Colonel Lee is one of the rare stories of a specific ROKAF pilot, yet indicative of the challenges faced by the training team of Bout One. See Hess, *Battle Hymn*, 83-84; Merritt, “Oral History Interview,” 31-32; Earle E. Partridge, “Oral History Interview, April 23-25, 1974,” US Air Force Oral History Program, Microfilm roll 32497, frame 953 (Maxwell Air Force Base, AL: Air Force Historical Research Agency), 576-577; and Allan R. Millett, *Their War for Korea: American, Asian, and European Combatants and Civilians, 1945-1953* (Washington, DC: Brassey’s, Inc, 2002), 182-183.

¹¹⁸ Leif A. Gruenberg, *Defining Moments: The Korean War* (Detroit, MI: Omnigraphics, 2004), xix.

withdrawal from Korea matched the growing conviction of the importance of strategic nuclear operations over tactical air capability, reflective of the growing US policy of containment against communism.¹¹⁹ Ironically, the 1949 communist victory in China triggered little concern for the Korean peninsula, with the USAF instead consolidating its airpower at bases in Japan. What had been retained in Japan was focused on the Soviet threat of nuclear bombers, rather than on communist forces in North Korea. Retired USAF General William M. Momyer wrote that “strangely enough, since we didn’t have anybody in Korea, we didn’t make a plan for Korea.”¹²⁰ By early 1950, the FEAF had completed upgrades from the WWII propeller-driven F-51 to the Lockheed F-80 air interceptor jet aircraft, shifting from multi-role fighters to bomber escorts. Still the US forces in Japan, recalled the aide-de-camp to the FEAF commander, “at that time weren’t geared up to go right into a movement into Korea.”¹²¹ The Koreans were unprepared as well.

As Communist forces of Kim-Il Sung and his Soviet backers pushed south across the thirty-eighth parallel in June 1950, they anticipated a collapse of the South Korean government and military. Instead, the Republic of Korea Army (ROKA) and Republic of Korea Air Force (ROKAF) withdrew towards Pusan. Retreating with them were the few remaining US advisors of the Korea Military Advisory Group (KMAG). Like the rest of the Korean military, “the ROKAF was completely outmatched by its North Korean counterpart.”¹²² Its thirteen light observation aircraft and three T-6 trainers faced 132 combat aircraft in the DPRK’s inventory.¹²³ Korean

¹¹⁹ William W. Momyer, *Airpower in Three Wars (WWII, Korea, Vietnam)*, ed. A.J.C. Lavalley (1978; repr., Maxwell Air Force Base, AL: Air University Press, 2003), 3.

¹²⁰ Partridge, “Oral History Interview,” 573.

¹²¹ Merritt, “Oral History Interview,” 3-4; Robert Jackson, *Air War Over Korea* (New York: Charles Scribner’s Sons, 1973), 12.

¹²² William T. Y’Blood, ed., *The Three Wars of Lt. Gen. George E. Stratemeyer: His Korean War Diary* (Washington, DC: Office of Air Force History, 1999), 18.

¹²³ Jackson, *Air War Over Korea*, 13; Richard P. Hallion, *The Naval Air War in Korea* (Baltimore, MD: Nautical and Aviation Publishing Company of America, 1986), 29; Momyer, *Airpower in Three Wars*, 188.

President Syngman Rhee made an urgent plea for military assistance, specifically the immediate delivery of ten F-51s. US President Harry S. Truman wasted no time in responding to Rhee's request, and directed FEAF that, among other support, "ten F-51 Mustang aircraft [be] transferred to the Koreans as rapidly as possible."¹²⁴ On the day after the fall of Seoul, June 26, 1950, General MacArthur, now in command of Far East Command, approved the transfer of ten of the recently retired USAF aircraft from Japan. Despite presidential direction, some military leaders expressed concern over this hasty transfer. The FEAF commander, Lieutenant General George Stratemyer, worried about both the low competency of Korean pilots and the insufficient logistical infrastructure in Korea. His deputy and the commander of Fifth Air Force, Major General Earle E. Partridge, Jr., paid more attention to the hundreds of USAF F-80s fully combat loaded and ready to launch from the Japanese air bases.¹²⁵ Notwithstanding these commanders' reservations, the transfer went ahead and thus was born Bout One, a one-of-a-kind wartime flight training mission.

The Training

On June 30, 1950, Major Hess ferried the first aircraft from Itazuke Air Base, Japan, to Taegu, Republic of Korea. The aircraft themselves were former tow target aircraft, forgotten and in "sad mechanical condition."¹²⁶ Hess took with him nine other USAF pilots, four ground officers, and a hundred enlisted airmen. The ten American pilots were all volunteers looking for

¹²⁴ Allan R. Millett, *The War for Korea, 1950-1951: They Came from the North* (Lawrence, KS: University Press of Kansas, 2010), 115; Jackson, *Air War Over Korea*, 14.

¹²⁵ Y'Blood, *Korean War Diary*, 38-40; A. Timothy Warnock, ed., *The USAF in Korea: A Chronology, 1950-1953* (Maxwell Air Force Base, AL: Air University Press, 2000), 1-3; Partridge, "Oral History Interview," 576.

¹²⁶ Robert F. Futrell, *The United States Air Force in Korea, 1950-1953* (Washington, DC: Office of Air Force History, 1983), 89; William T. Y'Blood, *Down in the Weeds: Close Air Support in Korea* (Washington, DC: Office of Air Force History, 2002), 4; Y'Blood, *Korean War Diary*, 38.

action – reserve pilots, though trained and already assigned to FEAF in Japan, whose credentials to fly had been suspended earlier that year. Bout One became their ticket back into the cockpit.¹²⁷ Their Korean counterparts were the most experienced airmen in their air force, hand-selected by General Kim Chung Yul, the ROKAF chief of staff. These pilots would become “the cadre from which the country’s future airpower might develop.”¹²⁸ With nearly five thousand airmen, the ROKAF had previously been little more than facilities guardians, providing airfield maintenance in support of American aircraft on the peninsula. The airfield at Taegu (K-2), like most airstrips in Korea, was little more than a primitive, abandoned grass field.¹²⁹ Nonetheless, the pilots of Bout One immediately began combat missions.

By July 3, 1950, the ROKAF began flying their new aircraft, immediately providing close air support to the KMAG, ROKA, and the early elements of what would become the 24th Infantry Division (ID). Bout One, recalled Hess, was “the only combat-ready flying group established in Korea.”¹³⁰ The Japan-based fighters of the FEAF lacked sufficient fuel to cover the full battlefield, making the Korean F-51s a valuable commodity. Historian Robert Jackson noted,

because of its location the Mustang squadron was the only Allied unit capable of ranging along the whole length of the front and of patrolling the battle area for between two and three hours at a stretch. It was comforting for the commanders of the hard-pressed 24th Division and the ROK forces to know that a flight of Mustangs could be overhead within minutes of a request for help being sent out.¹³¹

On July 10, Hess and his wingman attacked a column of North Korean armor bearing down upon the US Army near Taejon. Using rockets and machine guns, Hess and his Korean student trapped

¹²⁷ Millett, *Their War for Korea*, 182; Merritt, “Oral History Interview,” 31.

¹²⁸ Hess, *Battle Hymn*, 83.

¹²⁹ Merritt, “Oral History Interview,” 10-11. During the Korean War, the FEAF numbered its bases on the Korean peninsula with K-numbers, in part to ease the US military’s understanding of many locations with difficult or similar names. See Futrell, *USAF in Korea*.

¹³⁰ Hess, *Battle Hymn*, 76, 85; Y’Blood, *Korean War Diary*, 50.

¹³¹ Jackson, *Air War Over Korea*, 26.

the enemy long enough to allow a full scale response from the fighters and bombers of Fifth Air Force. The ROKAF fighters, just starting their training, had contributed to the destruction of forty-four tanks and 197 trucks, in what would be called the Pyongtaek massacre.¹³²

As the intensity of the United Nations Command's defense of Korea increased in the weeks to follow, more USAF F-51s from Japan and the Philippines joined the ROKAF at Taegu. The subsequently established 6002nd Fighter-Bomber Wing formed an all-Mustang unit and absorbed Bout One's USAF pilots under an American colonel. Overrun by the disintegrating front lines, the ROKAF unit abandoned Taegu on July 23rd and UN forces collapsed to what would be called the Pusan perimeter in late July. By that time, Hess was the ROKAF's only remaining American pilot.

Bout One found a new home at Chinhae (K-10), away from the enemy but also separated from any logistical support from KMAG or United Nations Command. Hess's only benefactor was USAF Brigadier General Edward J. Timberlake, the vice commander of Fifth Air Force. Timberlake had deployed from FEAF headquarters to Korea in the first week after the fall of Seoul, leading the command's advance assessment team. He had therefore been in country for the early combat successes of Bout One.¹³³ With Timberlake's support, the newly designated 6146th Air Base Unit would keep ten F-51s, even as aircraft were lost to training accidents and combat crashes like that of Colonel Lee. The runway at Chinhae proved too short for Korean pilots to land safely, so they would launch from there on combat missions in the F-51s with an American instructor pilot in chase, and land at the longer practice runway at Pusan, thirty miles to the east. Then American pilots would ferry an AT-6 trainer plane from Chinhae to Pusan, swap aircraft

¹³² Paul M. Edwards, *Combat Operations of the Korean War: Ground, Air, Sea, Special, and Covert* (Jefferson, NC: McFarland & Company, 2010), 115; Futrell, *USAF in Korea*, 86; Millett, *Their War for Korea*, 183. Most accounts cite the number of destroyed vehicles as approximately 150. The more specific numbers here are from Edwards, *Combat Operations*.

¹³³ Merritt, "Oral History Interview," 5-6.

with the Korean pilots, and fly the F-51s back to home station.¹³⁴ As United Nations forces collapsed toward Pusan, all USAF aircraft from the FEAF withdrew to Japan, again leaving Hess's motley crew the only allied fighters based in Korea.¹³⁵

Two weeks after MacArthur's landing at Inchon, Bout One followed the advance of the front lines towards Seoul on September 27, 1950. Despite support from Fifth Air Force headquarters, however, Hess continued to face resistance from local Marine and Air Force leaders. Although Kimpo airfield would have been perfect for the Korean F-51s, American leaders would not permit the ROKAF to collocate with US aircraft, purportedly to prevent airfield overcrowding at Kimpo. Hess and his band of weary men established their new base at Yongdungpo (K-16), an abandoned airfield between Kimpo and Seoul. In an extraordinary show of support for the young air force, thousands of local villagers emerged to weed the airfield by hand.¹³⁶ After weeks of rehabilitating the airfield, the team moved north yet again, this time to Pyongyang (K-24) in the ongoing pursuit of keeping the Korean pilots near frontline ground units.¹³⁷ Ironically, the Pyongyang East airfield was also undeveloped, nothing more than a grass field with no established runways; one USAF officer recalled that aircraft takeoffs simply entailed pointing the nose into the wind, regardless of direction.¹³⁸

After the failure of the United Nations push north to the Yalu River, the battle lines again crumbled upon the nascent air force. By early December 1950, Bout One was forced to move operations back south. Relegated as second-class fighters to the ever-increasing numbers of USAF aircraft arriving on the peninsula, Hess searched for uninhabited airfields and ramp space.

¹³⁴ Hess, *Battle Hymn*, 123-125; Millett, *Their War for Korea*, 183-184.

¹³⁵ Y'Blood, *Down in the Weeds*, 14.

¹³⁶ Millett, *Their War for Korea*, 184.

¹³⁷ Hess, *Battle Hymn*, 158-159.

¹³⁸ Merritt, "Oral History Interview," 28

He settled those ROKAF pilots who had certified for combat in the middle of South Korea, at Taejon (K-5) from where they continued to fly combat missions. The training program, with a constant influx of new recruits, moved offshore to the island of Cheju-do (K-40). There, experienced Korean pilots, under American supervision, would teach the new pilots; graduates joined the fighting unit at Taejon. Despite the rise in combat operations and the constant need to fill the ground force units, this small air force seemed immune to recruiting challenges. The ROKAF chief of staff continued to directly select pilot trainees, and the accession numbers remained small enough to not cause manpower concerns. The FEAF continued to supply Bout One with replacement aircraft, increasing to ten F-51s for training at Cheju-do and ten with which to fight from Taejon.¹³⁹

Culture

Through the constant wanderings across the peninsula, Hess and his instructors faced the classic ordeals of all those assigned to train Koreans: “advisors confronted not only the challenges of combat, but also that of working with the [Koreans] whose language, culture, and ways were often incomprehensible.”¹⁴⁰ For the work of KMAG advisors, “training had to be presented in a visual format and reinforced through demonstration, rote memorization, and repetitive drill.”¹⁴¹ For the pilots of Bout One, this task presented an even more difficult challenge: in the single-seat cockpit of the F-51, the instructor and the student were never in the same airplane.¹⁴² Hess’s cadre

¹³⁹ Hess, *Battle Hymn*, 180-181, 199, 205.

¹⁴⁰ Ramsey, *Advising Indigenous Forces*, 24.

¹⁴¹ Bryan R. Gibby, “American Advisors to the Republic of Korea: America’s First Commitment in the Cold War, 1946-1950,” in *Military Advising and Assistance: From Mercenaries to Privatization, 1815-2007*, ed. Donald Stoker (New York: Routledge, 2008), 85.

¹⁴² The USAF did have a two-cockpit version of the Mustang, the F-82, labelled the Twin Mustang. These aircraft, with two parallel F-51 fuselages, had been developed in the final years of WWII for long-range fighter escort. In the late 1940s, the F-82 became an all-weather air defense interceptor to defend against the Soviet Tu-4, a nuclear bomber. By 1950, forty F-82Gs

relied on airborne hand signals and visual cues to communicate to their wingmen, and would literally lead the ROKAF pilot to the target. The USAF pilots were not taught to speak Korean, and the ROKAF pilots had not received formal language training and “couldn’t speak a word of English.”¹⁴³ The aide to Major General Partridge deemed that “Hess had to be a missionary to put up with some of the things that went on through this thing...he finally got them in combat, and he got them flying, and he shaped them into a real good flying organization.”¹⁴⁴

Like any commander, Hess faced the leadership task of keeping his airmen motivated and behaved – from learning to work with Korean counterparts they did not understand, to correcting a pair of airmen he found sitting on Korean burial mounds drinking beer. Hess’s passion for training the ROKAF pilots sustained the difficult operation. He maintained an “affection for the infant ROK Air Force [which] was exactly that of a parent—fierce, possessive, single-minded.”¹⁴⁵ He was so committed to the cause he became the subject of frequent study by visiting doctors, journalists, and staff from air force headquarters who at times wondered if he had “undergone a complete metamorphosis—become part Korean, in fact.”¹⁴⁶ T.E. Lawrence would have been proud of Dean Hess.

The challenges faced by the American instructors of Bout One echoed what one scholar described as the test for all advisors in Korea: “haphazard organization, training, and logistics

were assigned to FEAF at three bases in Japan, including at Itazuke. Those aircraft flew the first combat mission of the Korean War, launched from Japan in the early morning hours of June 25, 1950. The F-82 mission for the first few days of the war, while Bout One was standing up, was primarily air-to-ground. By early July 1950, the F-82s had shifted to air-to-air missions and tallied the first shoot-down of a North Korean aircraft. Major General Partridge, the Fifth Air Force commander, described this F-82 as a single-pilot aircraft, with the pilot in one side and a radar operator on the other side. See Partridge, “Oral History Interview,” 623.

¹⁴³ Partridge, “Oral History Interview,” 576.

¹⁴⁴ Merritt, “Oral History Interview,” 33.

¹⁴⁵ Hess, *Battle Hymn*, 82, 113, 232.

¹⁴⁶ *Ibid.*, 147.

combined with challenges in understanding Korean history, language, and culture to make the problems of advice and assistance nearly impossible to fathom.”¹⁴⁷ Besides the pilot training at the start of the war, Bout One founded an aircraft mechanics school, a formal flight training program, and an Air Force Academy for new recruits. In the view of General Partridge, the dedication of Dean Hess and the skill and motivation of the Korean students jointly produced the successes of Bout One; this, despite an intermittent institutional commitment to the project.¹⁴⁸

Commitment

There was very little organizational or institutional support for these new American advisors in Korea. Besides Timberlake, Hess recalled, only a few Americans “fully grasped the importance of our work in training this cadre of men who later would head an ever-expanding ROK Air Force.”¹⁴⁹ The forced assimilation into the 6002nd Fighter-Bomber Wing suffocated the early success of the wartime flight training project. Just a week later, the forced move from Taegu to Chinhae risked the project’s complete failure. Hess feared that “once broken, an organization, especially one of such strange components as Bout I [sic], like Humpty Dumpty, can never be fully put back together again...Bout I [sic] had been dissolved...there would be no more Korean air force.”¹⁵⁰ But the ROKAF would rise again due to some key supporters.

In the wartime advising and training environment of South Korea, “personal relationships became crucial to success.”¹⁵¹ Major Hess benefitted from a close working relationship with both USAF General Timberlake and ROKAF General Kim, securing a steady flow of resources in both

¹⁴⁷ Gibby, “American Advisors to Korea,” 106.

¹⁴⁸ Partridge, “Oral History Interview,” 577.

¹⁴⁹ Hess, *Battle Hymn*, 98.

¹⁵⁰ *Ibid.*, 108.

¹⁵¹ Gibby, “American Advisors to Korea,” 86.

aircraft and recruits. After the villagers rallied to restore the Yongdungpo airfield, Hess parlayed the popular support into political capital with General Partridge, who began advocating for the legitimacy and credibility of the ROKAF.¹⁵² Partridge fostered a close working relationship with General Walton H. Walker, commander of the US Eighth Army in Korea. The two officers attended one another's daily briefings and flew together to the front lines in a USAF T-6. With tactical developments in the war continuously affecting the United Nations strategy, Partridge and Walker held regular audiences with numerous US and Korean political leaders.¹⁵³

One association for Hess, though, proved even more essential to the limited support enjoyed by Bout One. In the middle of July, American embassy officials escorted Hess to meet President Rhee at the South Korean leader's makeshift home in Taegu, to which he had fled when the Communists invaded Seoul in June. The meeting was intended as a status briefing on the progress of training the ROKAF pilots, but it sparked a very close ten-month friendship between Hess and Rhee. The president fled from Taegu to Chinhae about the time that Bout One made the same transition. During Hess's tenure in the south, Rhee would frequently summon his American friend for any encouraging news about his new air force, the front line battles, or United Nations battle plans. While the relationship concerned most politicians and military leaders, it afforded Hess a deeper understanding of the strategic context in which he fought. He saw Rhee's personal risk and complete dedication to the cause of Korean independence. He witnessed the policy tension between the ROK leader and US leaders like MacArthur and Truman. More importantly, though, the friendship with Rhee secured Hess's access to institutional support for the ROKAF, including political protection and financing for airfield construction.¹⁵⁴

¹⁵² Millett, *Their War for Korea*, 184.

¹⁵³ Partridge, "Oral History Interview," 575-576, 588; Merritt, "Oral History Interview," 10-12.

¹⁵⁴ Hess, *Battle Hymn*, 102-105, 125-127.

Combat

Dean Hess's orders as he left Japan in June 1950 were clear: Bout One was only to be a training mission, with the American advisors remaining out of combat. The problem with wartime flight training, of course, was that "it was hard to tell where the teaching stopped and the fighting began."¹⁵⁵ As the Korean F-51s were the only peninsula-based combat aircraft for the first weeks of July, they received the lion's share of air support taskings. Though the Mustang had proven its air-to-air value in WWII, it was not well-respected as a ground-support fighter.¹⁵⁶ For the ROKAF pilots of Bout One, though, it was the most advanced tactical aircraft they had flown.

Even the ground units were disorganized at first. General Walker once personally tasked Hess with a bombing mission accompanied by a unique friendly deconfliction plan: "If they look organized, shoot at them. It couldn't be us."¹⁵⁷ The fog of war presented a fairly non-standard environment in which to train new fighter pilots. But the credibility of this new unit, the very notion of a Republic of Korea Air Force, rested on a successful combat record. Hess understood that this "little air force of F-51s could only be truly effective based near the front lines. So, when our ground forces advanced, we had to pack up our things and advance too."¹⁵⁸ Many of Bout One's challenges over the nine months of 1950-1951 could be traced to the pursuit of that fight.

Their Own Air Force

By late March 1951, the ROKAF had earned some modicum of credibility with US forces. They were effective tactically, even though they were not operationally networked into the integrated air-ground targeting systems. That level of development would take years, as the

¹⁵⁵ Hess, *Battle Hymn*, 76, 84.

¹⁵⁶ Hallion, *Naval Air War in Korea*, 40-41.

¹⁵⁷ Hess, *Battle Hymn*, 86.

¹⁵⁸ *Ibid.*, 140.

USAF would learn in Vietnam. When Dean Hess redeployed in May 1951, he turned over Bout One to Colonel Kim Shin Kim, one of the Korean pilots he had trained.¹⁵⁹ The growing group of ROKAF airmen later became the 51st Provisional Fighter Squadron, a fighter unit in its own right.¹⁶⁰ By the end of hostilities in 1953, the ROKAF had grown into a full combat wing at Kangnung.¹⁶¹ Many of the Korean officers of Bout One went on to leadership careers in the military and business, including one of Hess's wingmen who, as a general in 1970, became the ROKAF chief of staff.¹⁶²

For the labors of these USAF wartime flight instructors not to be in vain, they had to empower the strategic narrative of an independent and free South Korea with the tactical capability of an effective ROK air force. Norman Brozenick, the combat aviation advisor, reminded the operational artist “to realize that employment of American airpower, no matter how tactically successful, can erode host government legitimacy.”¹⁶³ Despite the wartime flight training efforts of Bout One, the ROK's survival depended much more on US airpower than on the limited success of the diminutive ROKAF. That dilemma of dependency would be a lesson the United States would relearn just a few years later in Vietnam.

¹⁵⁹ Hess, *Battle Hymn*, 237. Some discrepancy exists regarding Hess's replacement as commander of the 6146th Air Force Advisory Group. In his autobiography, Hess claimed to have handed over command to a ROKAF officer. An anthology by the Air Force Historical Records Agency listed Hess's replacement as Major Harold H. Wilson, who had been Hess's deputy since December 1950. See Judy G. Endicott, ed., *The USAF in Korea: Campaigns, Units, and Stations, 1950-1953* (Washington, DC: Office of Air Force History, 2001), 109-110.

¹⁶⁰ Edwards, *Combat Operations*, 115.

¹⁶¹ Jackson, *Air War Over Korea*, 170.

¹⁶² Millett, *Their War for Korea*, 185.

¹⁶³ Brozenick, “Another Way to Fight,” 27.

Case #3: “Flying Dragons,” South Vietnamese Air Force, 1955-1975

Like a 20 year old man, it was in the prime of life when it came to an untimely end... It was only a young air force with outside support, like that needed by any small nation. It had great potential to grow and develop, thus fulfilling its mission to safeguard its county.

— Air Vice Marshal Nguyen Cao Ky, *Flying Dragons*

Lieutenant Colonel Duong Thieu Hung had trained for this mission since entering flight school more than a dozen years earlier. In many ways, his career had mirrored the development of the South Vietnamese Air Force (VNAF). Born in Hanoi, he had been recruited by the French Air Force for its fledgling auxiliary, *l'Armée de l'Air Vietnamienne*. As an aviation cadet in 1952, he flew the Morane-Saulnier 500 (MS.500) Criquet at Nha Trang, in the first Vietnam-based pilot training class. Hung fled south after Dien Bien Phu fell to Viet Minh forces in 1954 and was a member of the 1st Fighter Squadron at the birth of the VNAF in 1955. As the United States military replaced that of colonial France in the late 1950s, he qualified on the F8F Bearcat, rising to command the 1st Fighter Squadron. Having transitioned to the A-1E Skyraider in the early 1960s, he was by 1965 the deputy commander of the 41st Tactical Wing at Da Nang, in the northernmost province of South Vietnam. This mission would be Hung's first trip back to his native land, albeit under different circumstances than he had expected.

The Viet Cong had launched a mortar attack against US military facilities in South Vietnam on February 7, 1965. The next day, US President Lyndon Johnson authorized Operation Flaming Dart, featuring joint retaliatory airstrikes by the VNAF and USAF. As one of the VNAF's most experienced fighter pilots, Hung had been handpicked to fly this first-ever bombing raid into North Vietnam. Air Vice Marshall Nguyen Cao Ky, Commander of the VNAF, led the formation of twenty-four aircraft.¹⁶⁴ On the afternoon of February 8, A-1s launched from

¹⁶⁴ The rank of Air Vice Marshall was an honorary title awarded in 1964, reminiscent of Ky's days with the French Air Force. Ky's highest official rank was Major General, although he most often used Air Vice Marshall. See Robert C. Mikesch, *Flying Dragons: The South Vietnamese Air Force* (Atglen, PA: Schiffer Military History, 2005), 60.

Da Nang, escorted by twenty USAF F-100s used for flak suppression. They flew north, avoiding enemy radar low over the South China Sea. One hour and 125 miles later the pilots found their targets, North Vietnamese Army (NVA) barracks and supply buildings at Chap Le. Through heavy anti-aircraft artillery, they destroyed or damaged just 15 percent of the intended facilities. Hung's aircraft, like every one of the two dozen fighter-bombers, had been hit. He limped it back out to sea and bailed out over the relative safety of the water. As the rest of his compatriots continued home, a VNAF helicopter rescued Hung and carried him back to Da Nang.¹⁶⁵

Operation Flaming Dart opened a new phase in the Vietnam War. Even if tactically ineffective, the air strikes were strategically important. The United States had demonstrated its willingness to take the fight to North Vietnam with conventional airpower. VNAF had come of age, ready to engage in combat operations. Though the reprisal attacks did little to deter future Viet Cong raids on US military infrastructure, they "did temporarily lift the sagging morale of the South Vietnamese" and elevate Nguyen Cao Ky to national significance.¹⁶⁶ Ky would become

¹⁶⁵ Mikesh, *Flying Dragons*, 67; Carl Berger, ed., *The United States Air Force in Southeast Asia, 1961-1973: An Illustrated Account* (Washington, DC: Office of Air Force History, 1984), 37; Aldon Purdham, Jr., *America's First Battles: Lessons Learned or Lessons Lost?* CADRE Paper No. 16 (Maxwell Air Force Base, AL: Air University Press, 2003), 39-40. Berger's book is a well-illustrated, single-volume history of airpower in the Vietnam War, published shortly after the war by the Office of Air Force History. Used here is the 1984 edition. Mikesh, an aviation historian, is former Senior Curator at the Smithsonian Institution's National Air and Space Museum. A veteran USAF pilot with tours in Korea and Vietnam, he served as an air liaison officer with the VNAF. *Flying Dragons* is a comprehensive history of the VNAF from 1951 to 1975, drawing from official USAF histories and numerous interviews with US and VNAF veterans. The 1988 version, by Osprey Publishing, was unavailable; used here is the 2005 edition from Schiffer Publishing. It contains personal accounts from VNAF leaders and provides exhaustive appendixes covering VNAF aircraft, unit insignia and histories, air bases, and VNAF order of battle. Unfortunately, the book is not well footnoted and, in some places, Mikesh appears to include large sections of text from other sources without attribution. This monograph compared Mikesh's history to official accounts from various US military sources, including the Office of Air Force History, the Indochina Monographs from the US Army Center of Military History, and reports from Project CHECO (Pacific Air Force's Division for Contemporary Historical Examination of Current Operations). Where available, those sources are cited, though Mikesh's account appears to be credible. Where Mikesh is used, it is due to lack of other source material or it is for his opinion as a noted aviation historian.

¹⁶⁶ Berger, *USAF in Southeast Asia*, 37.

Prime Minister of the Republic of Vietnam just four months later, at the age of 34, remaining Commander of the VNAF until 1967 when he became the nation's Vice President. Duong Thieu Hung would rise to the rank of Colonel with three consecutive wing command assignments – 41st Tactical Wing, 33rd Tactical Wing, and 23rd Tactical Wing – eventually overseeing the VNAF transition to jet fighters with the F-5A in 1967.¹⁶⁷ Strategically important but still tactically developing, this young air force needed continued training and more equipment. It would prove to be one of the USAF's great operational challenges of the Vietnam War.

Road to War

The independent VNAF began humbly, as an auxiliary arm of the French colonial army. After the Second World War, France attempted to reassert its authority over its Indochina colonies – Vietnam, Laos, and Cambodia. The ensuing fight against nationalist and communist insurgents in the region grew into the Indochina War. By February 1950, the war's cost had become burdensome for the French, leading them to ask the United States for economic and military assistance. Requesting \$94 million in equipment, the French made it clear that without US support, they would be forced to withdraw from Indochina.¹⁶⁸ Determined to prevent the fall of Southeast Asia to communism, the US response of \$164 million in military aid came with strong pressure for France to rely on indigenous military forces. Later that year, France created the Republic of Vietnam Armed Forces (RVNAF) under the French army. In June 1951, the French established an air training center on the airfield at Nha Trang, followed the next month by an Air Department office in Saigon.¹⁶⁹ The earliest Vietnamese student pilots, including Ky, were sent to France for primary flight training and Morocco for tactical flight training. By 1952, the

¹⁶⁷ Mikesch, *Flying Dragons*, 7, 94-97.

¹⁶⁸ Mott, *Military Assistance*, 171.

¹⁶⁹ Robert F. Futrell, *The United States Air Force in Southeast Asia: The Advisory Years to 1965* (Washington, DC: Office of Air Force History, 1981), 4-11; Mikesch, *Flying Dragons*, 18.

school at Nha Trang supported in-country maintenance courses, aviation cadet training, and a small primary flight school, graduating just fourteen students, including Hung.¹⁷⁰ Training and operational flying both used the MS.500 Criquet, a French version of a German design from the interwar years. Appropriately named for its buzzing sound, “this slow, docile aircraft became a symbol of the Vietnamese Air Force during this early period.”¹⁷¹ By the middle of the decade, the French added Dassault MD-315 liaison aircraft and Douglas C-47 light transport aircraft. When the Geneva Accords divided North and South Vietnam after the defeat at Dien Bien Phu in 1954, the French-sponsored Vietnamese Air Force boasted just four squadrons of obsolete propeller-driven aircraft, and not more than three hundred airmen.¹⁷²

In Geneva’s wake, two Vietnams materialized. North Vietnam, with Ho Chi Minh in control of the communist political class, boasted strong nationalist forces backed by the military power of the Viet Minh. South Vietnam, led by the demure President Ngo Dinh Diem, lacked both a trained military and a strong central government. The French had previously eschewed US assistance in training the Vietnamese military, but now Diem needed help. In 1955, US President Dwight Eisenhower supported Diem’s plans to build an Army of the Republic of Vietnam (ARVN) and a proper air force. Diem formally established the independent VNAF on July 1, 1955, with the goal of raising four thousand airmen to field five flying squadrons.¹⁷³ For two years, responsibility for the fledgling air force slowly transferred from French to American

¹⁷⁰ Corum and Johnson, *Airpower in Small Wars*, 234; Mikesh, *Flying Dragons*, 15-18. By 1954, the United States provided 80 percent of France’s financing for the Indochina war. That year, the United States delivered over \$400 million in military equipment and supplies to France. See Mott, *Military Assistance*, 241; and Harold A. Hovey, *United States Military Assistance: A Study of Policies and Practices* (New York: Frederick A. Praeger, Inc., 1965), 29.

¹⁷¹ Mikesh, *Flying Dragons*, 18.

¹⁷² Futrell, *Advisory Years*, 10-11; Corum and Johnson, *Airpower in Small Wars*, 234; Mikesh, *Flying Dragons*, 20-23.

¹⁷³ Futrell, *Advisory Years*, 34-37; Berger, *USAF in Southeast Asia*, 8; Mikesh, *Flying Dragons*, 29-31.

advisors – indeed a challenging time for Vietnamese airmen who had to learn under two very different languages and military doctrines. Unfortunately, as military historian John Sbrega explained, “the methods and procedures used by the French Air Force – those that had proved so ineffective in the First Indochina War (1946-1954) – shaped the development of the VNAF.”¹⁷⁴ When the French finally left Vietnam in 1957, the VNAF consisted of one squadron of F8F Bearcat fighter-bombers passed down from the US Navy, two squadrons of C-47s, and two squadrons of Cessna L-19 liaison aircraft (later called O-1 Bird Dogs) to replace the MS.500s.¹⁷⁵

The United States established a MAAG in Saigon in August 1950 to guide US military support to the RVNAF. With uneven effort, “extraordinary priority was given to developing the army, [yet] only passing attention was accorded the Vietnamese Air Force.”¹⁷⁶ Through MAAG oversight, the Military Assistance Program transferred aircraft to the French in the early 1950s, many of which were eventually gifted to the Vietnamese, including the C-47s and F8Fs. In the latter half of the decade, the Mutual Defense Assistance Program transferred aircraft directly to South Vietnam, including fifty-five T-6 trainers, U-17 observer aircraft, and enough F8Fs to form the VNAF’s 1st Fighter Squadron in January 1956.¹⁷⁷ Corum and Johnson explained that,

despite its growth and independent status, the South Vietnamese air force remained a supporting arm of the South Vietnamese army in the 1950s. In its counterinsurgency

¹⁷⁴ John J. Sbrega, “Southeast Asia,” in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington, DC: Office of Air Force History, 1990), 419; Mikesh, 27.

¹⁷⁵ Sbrega, “Southeast Asia,” 419.

¹⁷⁶ Futrell, *Advisory Years*, 49. The purpose of MAAG was not to advise and assist, as the name implied, but rather to oversee transfer of military equipment to South Vietnam. See Mott, *Military Assistance*, 171; and Hovey, *United States Military Assistance*, 29.

¹⁷⁷ Mikesh, *Flying Dragons*, 24-26 and 32-35; Corum and Johnson, *Airpower in Small Wars*, 235. One Air University study noted that, although the fifty-five T-6s operated at Nha Trang for two years, “this short-lived program was possibly the biggest missed opportunity of the entire US training effort. The T-6 course should have been the beginning of a Vietnamese Undergraduate Pilot Training program to provide self-sufficiency for the force... The T-6 program was abandoned in favor of the expedient of training VNAF pilots in the US.” See William Denehan, “From Crickets to Dragonflies: Training and Equipping the South Vietnamese Air Force, 1955-1972” (master’s thesis, Air Command and Staff College, 2007), 5.

role... [the VNAF] was equipped mainly to provide liaison, observation, and limited transportation capability. In short, the South Vietnamese air force was not conceived with a close support capability and certainly not with an offensive 'strategic' capability.¹⁷⁸

Even the few tactical fighters in the VNAF inventory had aged beyond usefulness. In August 1959, one of the F8F aircraft experienced a catastrophic failure of the wing, resulting in a dramatic accident. Following the crash, President Diem grounded the 1st Fighter Squadron's decrepit aircraft, asking the US to send jet fighters as replacements. The US commander in the Pacific proposed sending Diem a handful of T-33 jet trainers.¹⁷⁹ Unfortunately, the Geneva Accords prohibited the introduction of any new types of war material, restricting the VNAF to propeller aircraft.¹⁸⁰ When Diem dismissed the French aircrews at Air Vietnam, the country's commercial airline, and replaced them with VNAF personnel that same month, the VNAF's future grew yet more bleak. With too few personnel, insufficient training, and inadequate equipment, the VNAF "was struggling to get on its feet, much less wage an independent aerial campaign against the Viet Cong."¹⁸¹

Shaping the VNAF for effective counterinsurgency operations would require more personnel, advanced training, and modern aircraft and equipment. The Geneva Accords had limited the number of advisors to just over three hundred, making it impractical to develop any sort of effective flight training program in Vietnam. Furthermore, USAF doctrine in the late 1950s still valued strategic airpower over tactical employment. The service remained focused on

¹⁷⁸ Corum and Johnson, *Airpower in Small Wars*, 235-236.

¹⁷⁹ Futrell, *Advisory Years*, 54. Another concern for the United States was that South Vietnam, if given jet aircraft with longer range than the propeller F8Fs, would initiate attacks on North Vietnam and therefore escalate the war.

¹⁸⁰ Sbrega, "Southeast Asia," 419; Mikesh, *Flying Dragons*, 52; Futrell, *Advisory Years*, 54. This fleet-wide grounding by Diem may have been as much for political power as it was for doubts of the aircraft's structural integrity. Mott and others wrote about Diem's tight rein on the VNAF: "Until about 1960, President Diem retained personal strategic direction and command authority to deploy all forces...of the Republic of Vietnam." Mott, *Military Assistance*, 185.

¹⁸¹ Corum and Johnson, *Airpower in Small Wars*, 271.

early Cold War deterrence over close air support, and particularly cringed at the idea of getting mired in training programs for partner nation air forces.¹⁸² In the words of Earl Tilford, Jr., a USAF historian of the Vietnam War, “the US Air Force was not particularly interested in any third-rate air force that, according to international agreements, could not acquire or fly jets.”¹⁸³ To develop the VNAF properly would require a change in US policy and a change in USAF doctrine.

The VNAF in Two Squadrons

The 1st and 2nd Fighter Squadrons of the VNAF present an image of the broader force. Their stories offer a metaphor for VNAF development in four main phases: training and equipping (1961-1965), transition to advanced aircraft (1965-1968), expansion under US commitment and partnered combat operations (1968-1972), and independent combat operations (1973-1975).

The 1st Fighter Squadron began with F8F Bearcats in the 1950s, a relic of the French system equipped with aging, secondhand aircraft. When structural failures forced Diem to ground the Bearcats, the squadron received another former US Navy aircraft, the Douglas A-1E Skyraider in September 1960.¹⁸⁴ Armed with at least six five-hundred pound bombs, rocket pods, and often either napalm tanks or cluster bombs, the A-1 had a reputation for its heavy combat

¹⁸² Sbrega, “Southeast Asia,” 413; Corum and Johnson, *Airpower in Small Wars*, 242.

¹⁸³ Earl H. Tilford, Jr., *Setup: What the Air Force Did in Vietnam and Why* (Maxwell Air Force Base, AL: Air University Press, 1991), 61.

¹⁸⁴ Nomenclature used here for the Skyraider is that of the US Air Force. The VNAF received aircraft from the US Air Force, US Navy, and direct from the Douglas production line. The Navy AD-5, equivalent to the Air Force A-1E, was a two-seat aircraft transferred to the VNAF in 1960-61. The Navy AD-6, equivalent to the Air Force A-1H, was a single-seat aircraft transferred to the VNAF in 1961-1965. The Navy AD-5N, equivalent to the Air Force A-1G, was a four-seat night attack aircraft, while the Navy AD-7, equivalent to the Air Force A-1J, was a single-seat aircraft; these were transferred in small quantities to the VNAF in the late 1960s and in 1972, respectively. In total, the VNAF received 329 Skyriders over twelve years. See Mikesh, *Flying Dragons*, 152-153, 159-162.

load and long loiter time.¹⁸⁵ Earlier in 1960, six 1st Fighter Squadron pilots – all with good English skills and at least eight hundred flight hours – attended A-1 training with the US Navy in Corpus Christi, Texas. After forty flight hours of transition instruction, they continued A-1 training at Naval Air Station Lemoore, California, with another forty flight hours in tactical training and bombing practice. To ease the VNAF pilots’ adjustment from training to combat, the Navy sent one of its instructor pilots to Vietnam. Lieutenant Kenneth E. Moranville had trained the half dozen Vietnamese pilots at Corpus Christi, and provided critical continuity as the 1st Fighter Squadron received its A-1Es and began flying operational missions from Bien Hoa Air Base.¹⁸⁶ With intermittent training by USAF instructors in Vietnam, the squadron continued to refine its skills. In February 1965, it joined the mission led by Ky to bomb North Vietnam.

Diem’s government, pressured by the United States to adopt a greater counterinsurgency role, added a second squadron of fighter-bombers in December 1961. The 2nd Fighter Squadron was the only VNAF unit ever equipped with the T-28 Trojan, a simple and reliable platform “particularly well suited for developing countries with limited technical capabilities.”¹⁸⁷ Like the A-1, the T-28 was perfect for counterinsurgency warfare in an austere environment – easy to fly, able to operate from rough and remote airfields, and noted for long loiter times and plentiful ordnance. To reduce response time of these hearty yet slow aircraft, the VNAF often employed its fighter-bombers in an air cover role, escorting convoys and providing armed over-watch for ground operations.¹⁸⁸ The initial cadre for the 2nd Fighter Squadron came from experienced VNAF pilots in other aircraft, including the F8F and the C-47. Being collocated with the Air

¹⁸⁵Sbrega, “Southeast Asia,” 441; Mikesh, *Flying Dragons* 41.

¹⁸⁶ Mikesh, *Flying Dragons*, 37-41.

¹⁸⁷ Corum and Johnson, *Airpower in Small Wars*, 474.

¹⁸⁸ Arthur D. Davis, “Back to the Basics: An Aviation Solution to Counter-Insurgent Warfare” (master’s thesis, Air Command and Staff College, 2005), 19; Corum and Johnson, *Airpower in Small Wars*, 261.

Training Center at Nha Trang permitted consolidated pilot transition, maintenance training and supply operations courses. With training by a small team of USAF instructors in Vietnam in early 1962, the squadron's new T-28 pilots received operational certification.

The 2nd Fighter Squadron started flying combat missions by summer 1962. During the next two years, the rapid deployment of anti-aircraft artillery by the Viet Cong increasingly threatened vulnerable aircraft. In just the first four months of 1963, VNAF and USAF took two hundred fifty hits. The rising hazard finally forced the grounding of all remaining T-28s in 1964, when the 2nd Fighter Squadron moved north to Da Nang Air Base and transitioned to the A-1H. There the pilots of the 2nd Fighter Squadron flew as part of the historic February 1965 bombing mission. By the middle of the decade, 80 percent of all VNAF missions provided either close air support, convoy escort, or air interdiction, mostly with A-1s. These propeller-driven aircraft remained the workhorses of the 2nd Fighter Squadron and the VNAF until the arrival of South Vietnam's jet age with A-37s in 1969.¹⁸⁹

Training and Equipping

Shortly following the inauguration of US President John F. Kennedy, Soviet Premier Nikita Khrushchev announced his support for what he called wars of national liberation, guerrilla insurgencies designed to spread communism without triggering a US nuclear response. Kennedy immediately directed his Secretary of Defense, Robert S. McNamara, to increase military assistance to South Vietnam with the goal of preventing a Soviet-sponsored Viet Minh victory.¹⁹⁰ By the summer of 1961, McNamara ordered the transfer of thirty North American Aviation T-28 Trojans to South Vietnam. These durable propeller-driven aircraft, an armed version of the ubiquitous trainer, would form the VNAF 2nd Fighter Squadron later that year. In October,

¹⁸⁹ Corum and Johnson, *Airpower in Small Wars*, 251, 263-264; Mikesch, *Flying Dragons*, 42-49, 209.

¹⁹⁰ Futrell, *Advisory Years*, 63.

President Kennedy authorized the large-scale deployment of US ground advisors and dispatched General Maxwell D. Taylor to South Vietnam for a personal assessment of the situation. Taylor's report to Kennedy "recommended the deployment of US Air Force advisers and aircraft to train the South Vietnamese air force in counterinsurgency tactics."¹⁹¹ Reflecting the US military's increased presence and the shift from advising to direct training and assistance, MAAG evolved into MACV in February 1962.¹⁹² Five months later, McNamara sought more deliberate planning, instructing the armed services "to prepare a comprehensive plan for training and equipping the South Vietnamese to shoulder the burden of counterinsurgency themselves as American forces withdrew from South Vietnam."¹⁹³ The USAF response had already arrived in South Vietnam: Farm Gate.

Tactical Air Command had created Jungle Jim, the 4400th Combat Crew Training Squadron, in April 1961, at Eglin Air Force Base, Florida. With the dual purpose of flying combat operations and training indigenous air forces in counterinsurgency operations, this secret organization represented the USAF's first unit since WWII designed for guerrilla warfare. In late 1961, Jungle Jim presented the natural and immediate answer to Taylor's recommendation for air advisers. Detachment 2A, a portion of the squadron, deployed to South Vietnam in October 1961. Code-named Farm Gate, the team of 154 airmen brought eight T-28s, four SC-47 modified transport aircraft, and four RB-26 reconnaissance bombers to Bien Hoa Air Base near Saigon.

Ostensibly, the primary Farm Gate mission was to train the VNAF in day and night counterinsurgency tactics against the Viet Cong. It did not take long, however, for the demands of combat to outweigh the training. For early training sorties, Vietnamese pilots from the 1st Fighter

¹⁹¹ Corum and Johnson, *Airpower in Small Wars*, 241-242; Berger, *USAF in Southeast Asia*, 10-12.

¹⁹² Mott, *Military Assistance*, 190. By May 1964, MAAG had been completely absorbed into MACV. See Mott, *Military Assistance*, 249.

¹⁹³ Corum and Johnson, *Airpower in Small Wars*, 259.

Squadron sat in the back of Farm Gate T-28s or flew as crew members in the B-26. When VNAF pilots were unavailable, aviation cadets awaiting pilot training would jump in as observers.¹⁹⁴ Given the challenges of learning from vision-obstructed rear cockpits, noted Air Force historian Robert Futrell, “back seat combat training was more political than practical.”¹⁹⁵ Armed combat missions began in November 1961, followed the next month by joint Farm Gate-VNAF missions supporting the ARVN in the Mekong Delta.

Prior to the arrival of Farm Gate, the fighters of the 1st and 2nd Fighter Squadrons offered the only air strike capability in South Vietnam. Early in 1962, under pressure to find combat success against the Viet Cong, Farm Gate pilots flew increasingly more direct combat sorties, especially at night. Through November 1962, operational missions accounted for nine of every ten Farm Gate flights, reflecting very little focus on training.¹⁹⁶ This “confusion about their mission reflected the ambiguity of the American relationship with south Vietnam at this stage of the war,” namely whether to focus on training or on combat.¹⁹⁷ It also reflected the doctrinal debate between deterrent interdiction and tactical support. Corum and Johnson described Farm Gate’s “strategically defensive effort...[as] counter to US Air Force philosophy, theory, and tradition.”¹⁹⁸ Nonetheless, training missions continued. In spring 1962, Farm Gate sent four T-28 instructor pilots to Nha Trang to train twenty-five VNAF pilots of the newly formed 2nd Fighter

¹⁹⁴ Momyer, *Airpower in Three Wars*, 11-12; Sbrega, “Southeast Asia,” 420; Corum and Johnson, *Airpower in Small Wars*, 246; Mikesh, *Flying Dragons*, 44-49.

¹⁹⁵ Futrell, *Advisory Years*, 127. Tilford lamented that “for the most part, training was nothing but a ruse. It provided a cover so that when a plane was shot down there would be a large Caucasian body and a smaller Vietnamese body in the wreckage and the claim that the aircraft went down on a routine training mission would be acceptable.” Tilford, *Setup*, 67.

¹⁹⁶ Timothy W. Childress, “Improving US Air Force Performance in Irregular Conflict: Reestablishing a USAF Special Air Warfare Center” (master’s thesis, School of Advanced Air and Space Studies, 2007), 32.

¹⁹⁷ Ian Horwood, *Interservice Rivalry and Airpower in the Vietnam War* (Fort Leavenworth, KS: Combat Studies Institute Press, 2006), 122.

¹⁹⁸ Corum and Johnson, *Airpower in Small Wars*, 272.

Squadron. These T-28 missions included formation flying, instruments, day and night bombing, rocketry, and gunnery. In April, the USAF sent thirty pilots to fly C-47s in the VNAF's 1st and 2nd Transport Squadrons at Tan Son Nhut. These American replacements, dubbed the "Dirty Thirty," enabled the VNAF to release thirty of its C-47 pilots to T-28 transition at Nha Trang.¹⁹⁹ In July 1963, Pacific Air Forces designated Farm Gate the 1st Air Commando Squadron, openly recognizing its combat role. By the end of that year, the squadron had grown to thirty-five aircraft including thirteen T-28s, and remained the only USAF combat unit in South Vietnam.²⁰⁰

Like the 1st and 2nd Fighter Squadrons, the VNAF experienced a period of rapid expansion in the early 1960s. At the start of 1962, the VNAF's four thousand personnel supported seventy aircraft in six operational squadrons. By the end of 1965, VNAF strength had expanded to almost thirteen thousand airmen, nearly four hundred aircraft, and sixteen operational squadrons, as well as the Air Training Center at Nha Trang, a support base at Pleiku, and an air logistics depot at Bien Hoa.²⁰¹ The increased role of USAF airmen in training and equipping the VNAF directly affected the organizational structure of the developing air force. In early 1963, the VNAF reorganized into four tactical wings, each aligned to one of the ARVN's four Corps Tactical Zones (CTZ): 41st Tactical Wing in I CTZ (Da Nang), 12th Tactical Wing in II CTZ (Nha Trang), 23rd Tactical Wing in III CTZ (Bien Hoa), and 74th Tactical Wing in IV CTZ (Can Tho, and later Binh Thuy). Each composite tactical wing fielded a fighter squadron, helicopter squadron, and observation (liaison) squadron, and some carried transport or special mission squadrons. The USAF's Air Advisory Group under MACV assigned a small team of advisors to each regional wing and incorporated the VNAF aircraft in the nascent theater air control

¹⁹⁹ Corum and Johnson, *Airpower in Small Wars*, 248; Berger, *USAF in Southeast Asia*, 18; Mikesh, *Flying Dragons*, 62.

²⁰⁰ Berger, *USAF in Southeast Asia*, 15; Mikesh, *Flying Dragons*, 48-49.

²⁰¹ Corum and Johnson, 248-249; Mikesh, *Flying Dragons*, 144-145.

system.²⁰² Along with wing reorganization, the already-existing squadrons renumbered, with the 1st and 2nd Fighter Squadrons becoming the 514th and 516th Fighter Squadrons, respectively. Adding to this strength, Secretary McNamara directed the creation of four more A-1H squadrons in 1964 – the 518th, 520th, 522nd, and 524th.²⁰³ By 1965, VNAF fighter pilots were flying an average of 231 sorties per pilot annually, totaling sixty-five thousand combat flight hours that year.²⁰⁴ Despite these impressive measures of performance, there remained some significant challenges in effectiveness for the VNAF.

Ineffective leadership, training deficiencies, and insufficient facilities plagued the VNAF during this period of expansion. The explosive growth of the force had left little time for professionalism of the service's leaders. Most senior officers had less than ten years in military service, many lacked significant flying experience, and some were even pulled from the ARVN without any background in aviation. Corum and Johnson wrote about the dearth of effective leaders, noting "the South Vietnamese air force was run at the squadron level and driven by personalities," the most forceful of which was Nguyen Cao Ky.²⁰⁵ In November 1963, as the air force deputy commander, he supported a military coup against President Diem, ordering two of the 2nd Fighter Squadron's T-28s to attack the presidential palace and interdict ARVN troops

²⁰² Mikesh, *Flying Dragons*, 58-59; Corum and Johnson, *Airpower in Small Wars*, 248, 263; Horwood, *Interservice Rivalry*, 80.

²⁰³ Beginning in January 1963, the VNAF's unit numbering system followed a logical pattern. For tactical wings, the first digit corresponded to the order in which the wing had been established, and the second signified the ARVN corps with which the VNAF wing was aligned (i.e. the 41st Tactical Wing at Da Nang was the fourth wing established, and supported the I CTZ). For squadrons, the first digit of three indicated the unit mission, and the second and third numbers represented the order in which the squadron had been created – alternating by two and offset in odd/even from the first number (i.e. 110th Observation Squadron, 211th Helicopter Squadron, 312th Special Mission Squadron, 413th Transport Squadron, 514th and 516th Fighter Squadrons, 918th Training Squadron). See Mikesh, *Flying Dragons*, 181, 207-210.

²⁰⁴ Berger, *USAF in Southeast Asia*, 32; Corum and Johnson, *Airpower in Small Wars*, 235, 250; Mikesh, *Flying Dragons*, 42-44.

²⁰⁵ Corum and Johnson, *Airpower in Small Wars*, 250; Mikesh, *Flying Dragons*, 59.

who were attempting to support the beleaguered president.²⁰⁶ As the thirty-three-year-old air force commander, he and other generals dubbed the “young Turks” staged a countercoup in January 1964, installing an armed forces council in charge of South Vietnam. In light of Ky’s use of the air force to defeat yet another coup attempt in September 1964, the armed forces council rewarded his loyalty with the role of Prime Minister in 1965. His high-handed methods, however, contributed to ongoing tension between the VNAF and the ARVN, especially over control of the regionally-aligned tactical wings.²⁰⁷

Even at the squadron level, the VNAF struggled with tactical leadership. While pilots had been effectively trained in the T-28 and A-1, the VNAF lacked forward air controllers. These pilots, usually flying the O-1 liaison aircraft, served the critical role of managing airborne fighter-bombers and directing air strikes to support ground commanders. The few Vietnamese who had been trained as forward air controllers disappointed the ARVN and concerned the USAF.²⁰⁸ Finally, the growth of the VNAF in the early 1960s outpaced its ability to develop sufficient facilities, especially ramp and hangar space, at the handful of primary air bases in South Vietnam. As the US military presence increased to shoulder more of the war’s combat role, the influx of USAF aircraft and personnel exacerbated airfield overcrowding. At Tan Son Nhut, for instance, an airfield designed for seventy-five aircraft and four thousand personnel had by 1965 become home for over four hundred aircraft and twenty-four thousand personnel.²⁰⁹

²⁰⁶ Nguyen Cao Ky, *Twenty Years and Twenty Days* (New York: Stein and Day, 1976), 37-39; Nguyen Cao Ky, *Buddha’s Child: My Fight to Save Vietnam* (New York: St. Martin’s Press, 2002), 96.

²⁰⁷ Ngo Quang Truong, *RVNAF and US Operational Cooperation and Coordination*, Indochina Monographs (Washington, DC: US Army Center of Military History, 1980), 4; Dong Van Khuyen, *The RVNAF*, Indochina Monographs (Washington, DC: US Army Center of Military History, 1980), 13.

²⁰⁸ Sbrega, “Southeast Asia,” 434, 478n.

²⁰⁹ Corum and Johnson, *Airpower in Small Wars*, 250.

These growing pains were remarkable in both magnitude and unfamiliarity. Aviation historian Robert C. Mikesh, in his account of the VNAF, explained this growth period well: “that no other air force had a similar experience of rapid expansion would be an understatement, and it would become even more startling in the years to come.”²¹⁰ The opening chapters in the history of the VNAF had climaxed in 1965 with Operation Flaming Dart. To prepare this force for the communist offensives of 1968 and 1972 would require the USAF to overcome cultural barriers in its training programs. To prepare the VNAF for independent operations following the withdrawal of US forces in 1973 would require an increased commitment to equipping the Vietnamese. Only then might they be effective in combat.

Culture

By 1965, noted Mikesh, “the VNAF had a solid corps of battle-hardened pilots to fill the air support role.” Their confidence had increased with combat experience, especially in counterinsurgency warfare inside their own country. For some, this self-reliance meant that continued training and tactical advice from the US military seemed unnecessary. For others who still welcomed training and advice, the language and cultural barrier remained, in the words of one ARVN general, “a wide and seemingly unbridgeable gap.”²¹¹ Even for all the structural similarities between the USAF and the VNAF, and even when the language challenge could be mitigated, the cultural differences lingered. As Ky explained:

It might be assumed that the VNAF was a US Air Force transplant. It was not; it merely used many of the same aircraft, procedures, and techniques... But there the resemblance ended. The realities of Asian economics and Asian background took over. What seemed viable and natural to the Western mind would often prove to be the opposite for them.²¹²

²¹⁰ Mikesh, *Flying Dragons*, 62.

²¹¹ Truong, *RVNAF and US*, 173.

²¹² Mikesh, *Flying Dragons*, 6.

From the earliest days of US advising in South Vietnam, both the US and South Vietnamese militaries had implemented institutional solutions to address the language barrier. The RVNAF established the Armed Forces Language School in 1956 to provide English language training for its personnel in both the ARVN and the VNAF. The six-month program sought to develop a functional understanding of English for any students designated for training with Vietnam-based US military units or for formal training courses in US-based schools. Vietnamese airmen enroute to pilot and technical training had to achieve comprehension levels of eighty and seventy, respectively.²¹³ Farm Gate airmen, by early 1962, created a bilingual list of common radio terminology to help trainees, employing it in all VNAF training courses. Later that year, the USAF established an English language school at Hurlburt Field, Florida, to provide eight weeks of intensive language training for the VNAF pilots attending flight training there. In July 1963, a five-person USAF training team deployed to South Vietnam to launch small English language schools at Nha Trang, Tan Son Nhut, and in Saigon. After just six months, 514 Vietnamese students had graduated these courses, with 480 more still enrolled. On a wider scale, the Defense Language Institute at Lackland Air Force Base in San Antonio, Texas, became the first stop for most VNAF students attending flight and technical schools in the United States. This nine-week course started in 1963 and graduated thousands of Vietnamese airmen until the end of the US military involvement in South Vietnam. Students who demonstrated difficulty learning English repeated the course, since “too much time was lost if a student could not comprehend the language used in flight instruction.”²¹⁴ Later in the war, to increase RVNAF self-sufficiency through Vietnamization, the USAF developed training aids and translated technical orders and

²¹³ Mikesh, *Flying Dragons*, 35; Daley, “Exporting Airpower,” 52. By comparison, a comprehension level of one hundred represented an average US high school student.

²¹⁴ Berger, *USAF in Southeast Asia*, 309-310; Mikesh, *Flying Dragons*, 52. Berger records the length of the Defense Language Institute course as fifteen weeks; Mikesh recalls it lasting nine weeks. Based on training timelines for VNAF students who travelled to the US for flight school, the nine-week length seems more accurate.

on-the-job training documents into Vietnamese. It also invested heavily into the Air Training Center at Nha Trang, founding the VNAF English Language School and lowering target comprehension levels to as low as forty. By 1972, responsibility for all language training had been transferred to the Vietnamese, with all courses taught by Vietnamese instructors.²¹⁵

Nonetheless, sometimes formal language courses were not enough to overcome the language barrier. Lieutenant Pham Quang Khiem, a pilot trainee at Keesler Air Force Base in Biloxi, Mississippi, recalled one difficult event. While flying with a USAF instructor pilot, he struggled with the stall series, a sequence of maneuvers common to all pilots in which the aircraft is intentionally made to stop flying and then recovered. The instructor had been unable to instruct with either words or demonstration. That evening, Khiem's fellow VNAF students explained the maneuver in his native tongue. Khiem recalled:

The 'monkey see, monkey do' technique just did not work for me. For those of us in training in the United States, the theory of 'work together, graduate together' had a positive effect. Every night after training we would gather in a buddy's room and all talk about the day's experiences. We learned well from each other.²¹⁶

The next day, Khiem had no problem with the stall series. In later years, when mass producing an air force demanded increases in both quantity and technicality, language challenges became more significant. Historian Carl Berger noted that "the language barrier was never entirely overcome and remained a problem which handicapped all USAF training efforts throughout the war."²¹⁷

As with the language schools, the USAF-sponsored flight training programs took place in both the United States and South Vietnam. Most VNAF pilot trainees in the 1950s came from well-educated, affluent families. The service relaxed recruiting restrictions by the early 1960s to find well-qualified pilot candidates from among the broader population. Still, however, most

²¹⁵ Daley, "Exporting Airpower," 53; Mikesh, *Flying Dragons*, 107; Berger, *USAF in Southeast Asia*, 310, 319.

²¹⁶ Mikesh, *Flying Dragons*, 53.

²¹⁷ Berger, *USAF in Southeast Asia*, 310; Denehan, "Crickets to Dragonflies," 5.

students bound for flight school graduated from one of Vietnam's two military academies. As early as 1958, the USAF began sponsoring US-based flight schools. Primary flight training – the very first flying course, designed to turn pedestrian into pilot – began under contract civilian instruction at Graham Air Force Base in Mariana, Florida. By early 1961, the USAF conducted primary training itself, first at Moody Air Force Base in Valdosta, Georgia. The course moved to Randolph Air Force Base in San Antonio, Texas in 1963, then to Keesler by 1966. Basic flight training – a nine-month military flight school – started at Randolph in 1960. A decade later, over four hundred VNAF student pilots had graduated, each receiving two hundred flight hours in the T-28. By 1963, nearly one quarter of the VNAF's 7,700 airmen were students, most in some form of flight school.²¹⁸ The USAF invested yet again in US-based flight training during Vietnamization. The introduction of the A-37 in South Vietnam in the late 1960s had opened the door for USAF-style undergraduate pilot training. By 1971, a course specifically for the VNAF airmen commenced at Sheppard Air Force Base in Wichita Falls, Texas. The Vietnamese students received thirty hours in the T-41, followed by 170 hours in the T-37, the USAF's flagship trainer. This program facilitated a smooth transition to the A-37, the armed version of the T-37. For the period of 1971-1975, the VNAF graduates of USAF undergraduate pilot training jumped to over 220 per year, a nearly four-fold increase over the previous decade.²¹⁹

To complement formal flight schools in the United States, the USAF sponsored VNAF training programs in South Vietnam. Air Training Command of the USAF sent forty-five instructors on mobile training teams to teach T-28 maintenance procedures starting in May 1962. Similar teams later trained VNAF airmen on aerial reconnaissance and liaison techniques. In September 1963, the USAF began a primary flight training program at Nha Trang. With twenty-five Cessna U-17A training aircraft, the course enrolled fifty VNAF student pilots per class. The

²¹⁸ Mikesh, *Flying Dragons*, 52-55; Berger, *USAF in Southeast Asia*, 309.

²¹⁹ Mikesh, *Flying Dragons*, 79, 107.

sixteen-week program included four weeks of classroom academics followed by eighty flight hours. After graduating thirty-two maintainers and 117 pilots, the fourth class shifted to VNAF instructors with all classes in Vietnamese rather than in English.²²⁰ The program embodied a rare success in entrusting the Vietnamese with their own training, “indicative of what could have been possible with a well-planned strategic training and equipping program carried out in Vietnam with US-trained Vietnamese instructors.”²²¹ By 1965, most of the technical training (except the aforementioned basic flight training at Randolph) had moved back to Vietnam. In the following few years, over twelve hundred airmen completed maintenance and support training, as another 320 completed language training, in Vietnam. Near the end of Vietnamization, an undergraduate pilot training program mirroring the one at Sheppard began in Vietnam. The USAF started T-41 training at Nha Trang, followed by 180 hours of T-37 training at Phan Rang – all to the same standards of the US-based training program. A small number of students graduated in 1973 before the VNAF grounded the program due to insufficient funding in 1974.²²² While training the VNAF reflected ongoing USAF commitment to overcome cultural and language barriers, the next chapters of the VNAF history would be more challenging expansions.

Commitment

The VNAF’s first decade closed with the exponential growth of 1962-1965. Its second decade would be characterized by further development – first in quality, then later in quantity. At a congressional hearing in July 1964, Secretary McNamara had described the USAF effort in Vietnam as “on-the-job combat training.”²²³ To date, it appeared to have been effective. The

²²⁰ Berger, *USAF in Southeast Asia*, 309; Mikesh, *Flying Dragons*, 54-55.

²²¹ Denehan, “Crickets to Dragonflies,” 14.

²²² Berger, *USAF in Southeast Asia*, 311; Mikesh, *Flying Dragons*, 133.

²²³ Hovey, *United States Military Assistance*, 31.

commander of the USAF Advisory Group, Brigadier General Albert W. Schinz, remarked in 1965 that the “VNAF is a healthy child that needs to mature.”²²⁴ Like a growing teenager, the VNAF needed continued mentorship and hungered for more resources. From 1965 to 1968, the years of the US-led offensive in Vietnam, the VNAF swapped its aging propeller-driven aircraft for jet aircraft. From 1968 to 1972, the years of Vietnamization, the USAF sponsored an exponential expansion of both manpower and material. Both periods demonstrate a sustained commitment by the United States to develop Vietnam’s adolescent air force.

As the war’s operational tempo increased in 1965, the US military made two significant policy decisions that shaped the VNAF’s development. In March, the Pentagon lifted the restrictions against providing jet aircraft to the VNAF. Given repeated Geneva Accords violations by the North Vietnamese and their communist backers, the United States no longer felt bound to uphold the agreement.²²⁵ The next month, the commander of US Pacific Command directed MACV to consider close air support as the primary air mission in South Vietnam, with a focus on timely response to troops-in-contact situations.²²⁶ Taken together, these decisions paved the way for the VNAF to add jet aircraft to its growing inventory – briefly with the B-57 bomber in 1965, then in greater numbers with the F-5A and A-37 fighter-bombers. In July 1966, Secretary McNamara approved the conversion of six VNAF fighter squadrons from A-1s to jets, authorizing two squadrons to transition to the F-5A and four squadrons to the A-37.²²⁷ The Northrop F-5A Freedom Fighter, developed as a combat version of the T-38 advanced trainer specifically for partner air forces under the Military Assistance Program, was a low-cost and

²²⁴ Mikesh, *Flying Dragons*, 83.

²²⁵ At the same time, Secretary McNamara initiated a shift in strategy, from the previous “flexible response” of the counterinsurgency war, to “graduated escalation” which would mark the United States’ significant combat commitment. See Mott, *Military Assistance*, 195-199.

²²⁶ Purdham, *America’s First Battles*, 38.

²²⁷ Mikesh, *Flying Dragons*, 78.

lightweight high-performance fighter. With a combat load of five five-hundred-pound bombs and two 20-mm cannons, its speed enabled faster response times than the A-1H. The jet's fuel limitations, though, severely restricted both its loiter time and ordnance capacity.²²⁸ In August 1966, thirty-two VNAF pilots departed for F-5A training at Williams Air Force Base in Mesa, Arizona. While ten of the students enrolled in the nine-week language training course, the rest began the transition course to graduate in December. A detachment of USAF instructors accompanied the VNAF pilots back to South Vietnam, supervising hundreds of in-country training missions in the spring. The 522nd Fighter Squadron, the first VNAF F-5A unit, became operational on June 1, 1967.²²⁹ Due to the F-5's disappointing air-to-ground capability, the VNAF shelved plans to upgrade further squadrons for another seven years, until after the US military had left Vietnam. The VNAF needed a more durable and maneuverable fighter-bomber.

The Cessna A-37 Dragonfly offered the perfect combination of speed, maneuverability, and ordnance. Developed as a combat-modified version of the T-37 basic jet trainer, the A-37's simplicity and moderate loiter times made it the perfect fighter-bomber for the VNAF. Able to carry loads of up to eight 500-pound bombs and rocket pods, and armed with a nose-mounted 7.62-mm minigun, it would serve in both air-to-ground strike and forward air control roles.²³⁰ In late 1967, the VNAF selected 103 fighter pilots to fill three planned A-37 squadrons. The first eighteen pilots departed in February 1968 for A-37 transition training at England Air Force Base in Louisiana. By May, a USAF mobile training team arrived at Nha Trang to conduct in-country maintenance training. Between November and the following May, the VNAF received fifty-four A-37s and enough trained pilots and maintainers to field three units – the 524th, 520th, and 516th

²²⁸ James T. Bear, *VNAF Improvement and Modernization Program* (Headquarters Pacific Air Forces, Directorate of Tactical Evaluation, CHECO Division, February 5, 1970, declassified August 15, 2006), 52; Sbrega, 444; Mikesh, *Flying Dragons*, 153.

²²⁹ Berger, *USAF in Southeast Asia*, 314.

²³⁰ Bear, *VNAF Improvement*, 56; Mikesh, *Flying Dragons*, 76-77, 153.

Fighter Squadrons. This upgrade to jet fighters would be the last major development of the 516th, formerly the 2nd Fighter Squadron. By the end of the war, the USAF had delivered over two hundred fifty A-37s to South Vietnam.²³¹

While the upgrade from the A-1 to jet fighters increased the quality and capability of the VNAF, the capacity of the force remained relatively stable through 1968, at approximately four hundred total aircraft and sixteen thousand airmen. In the next four years, the air force would quadruple in size under the largest sponsored modernization and training effort in USAF history.²³² By early 1968, the US strategy in Southeast Asia had shifted to Vietnamization, meant to enable the South Vietnamese to shoulder the burden for their own self-defense. Operationally, according to one Pacific Air Forces analysis:

It was the goal of both the USAF and the VNAF in late 1969 to develop a self-sufficient Vietnamese Air Force. When the VNAF could fly and maintain their airplanes without the direct assistance of USAF personnel, Vietnamization of the air war would be a reality.²³³

The two-pronged strategy envisioned the disengagement of US ground forces from South Vietnam, along with the acceleration of training and material support for the RVNAF. To facilitate the second objective, MACV developed the RVNAF Improvement and Modernization Program, with both personnel and equipment growth specifically designated for the VNAF.²³⁴

The MACV plan for Vietnamization proposed increasing VNAF force structure to forty operational squadrons, double the number it had in late 1968. The goal, according to historian John Sbrega, was “to bolster the Vietnamese structure and personnel associated with, among

²³¹ Berger, *USAF in Southeast Asia*, 315; Mikesh, *Flying Dragons*, 79-80.

²³² Bear, *VNAF Improvement*, 22.

²³³ Drue L. Deberry, *Vietnamization of the Air War, 1970-1971* (Headquarters Pacific Air Forces, Directorate of Tactical Evaluation, CHECO Division, October 8, 1971, declassified July 18, 2008), 3.

²³⁴ James Lawton Collins, Jr., *The Development and Training of the South Vietnamese Army, 1950-1972* (Washington, DC: Department of the Army, 1975), 88-91; Mikesh, *Flying Dragons*, 103-104.

other things, the delivery of close air support.”²³⁵ More than just flying training, this would include investment in facility upgrades, air base operations training, and air strike coordination development. For all the challenges of improving the RVNAF, General Creighton W. Abrams, Jr., the MACV commander, believed “the toughest and longest training job we have with Vietnamization is the one the VNAF faces.”²³⁶

After the inauguration of US President Richard M. Nixon, the new Secretary of Defense, Melvin Laird, accelerated the program. Initially planned to run for five years, the modernization effort now faced a new target of December 1971. To meet this ambitious timeline, MACV and the USAF combined all the previous methods of instruction delivery – formal training courses based in the United States, mobile training teams deployed to South Vietnam, USAF-taught courses at VNAF air bases, and VNAF-taught courses in-country. Between March 1970 and summer 1971, over five thousand VNAF maintenance personnel graduated from technical training in the United States and returned to teach at the Nha Trang Air Training Center and other VNAF bases.²³⁷ Perhaps the most innovative and effective training during Vietnamization came in the form of integrated training. This program enabled VNAF airmen to train under USAF personnel at bases where the two air forces shared facilities. For English-speaking Vietnamese, one-on-one training enabled quick upgrades. For those who needed translators, small teams of five trainees either worked with an American instructor or received VNAF-taught classes. As the Vietnamese airmen completed their training, the USAF instructors would certify them as being combat-ready. In this manner, over twelve hundred VNAF personnel trained in thirty specialties, notably contributing to the success of the Improvement and Modernization Program.²³⁸

²³⁵ Sbrega, “Southeast Asia,” 464.

²³⁶ Bear, *VNAF Improvement*, 1; Mikesh, *Flying Dragons*, 88, 104.

²³⁷ Mikesh, *Flying Dragons*, 105-107.

²³⁸ Bear, *VNAF Improvement*, 30-31; Berger, *USAF in Southeast Asia*, 318.

The results of Vietnamization were immediately clear. In late 1969, the USAF Advisory Group commander, Brigadier General Kendall Young, praised the Vietnamese pilots as “simply amazing at delivering ordnance accurately – better than USAF units.”²³⁹ That year, the VNAF flew only 17 percent of the strike sorties in South Vietnam. The next year, the VNAF flew almost 40 percent of the strike sorties and participated in the campaign against the NVA in Cambodia. In 1971, the VNAF flew more than all the US services’ air arms combined, accounting for 70 percent of strike sorties and 63 percent of all air operations over South Vietnam.²⁴⁰ Vietnamese pilots were gaining credibility, but by late 1970, the stresses of Vietnamization began to reveal underlying vulnerabilities. As reported by an official analysis from Pacific Air Forces, “if the skill of its pilots was the VNAF’s strong point, management of maintenance, flying hours, and materiel was its weak point and required attention and assistance from its USAF advisors.”²⁴¹ The service had difficulty manning even twenty-two squadrons in 1970, let alone the target of forty. Depot maintenance and supply systems strained to keep up with expanding operations while the tactical wings struggled to manage base operations. The squadrons lacked sufficiently trained forward air controllers who could effectively integrate the fighter-bombers into the air-ground operation system. Furthermore, ARVN battalions lacked air liaison officers to coordinate close air support.²⁴²

The rapid growth under Vietnamization embodied the quintessential challenge of a developing military: increasing capabilities without increasing dependency. Earl Tilford observed that “as the ARVN and the VNAF became richer in firepower and mobility, they also became

²³⁹ Bear, *VNAF Improvement*, 50.

²⁴⁰ *Ibid.*, 61; Berger, *USAF in Southeast Asia*, 64, 319; Sbrega, “Southeast Asia,” 465; Mikesch, *Flying Dragons*, 110.

²⁴¹ Bear, *VNAF Improvement*, 50.

²⁴² Sbrega, “Southeast Asia,” 465; Bear, *VNAF Improvement*, 99.

increasingly dependent on those things.”²⁴³ Through the Improvement and Modernization Program, the indisputable commitment of the USAF to the VNAF clearly prepared the Vietnamese for combat operations. Perhaps it had come too late, though. Lieutenant General Ngo Quang Truong, commander of the ARVN’s I CTZ, assessed:

Entering the war with the posture and disposition of a fire brigade, the Americans rushed about to save the Vietnamese house from destruction but took little interest in caring for the victims. Only after they realized that the victims, too, should be made firefighters to save their own houses, did the Americans set about to really care for them.²⁴⁴

The question remained whether the VNAF would be as successful without US military assistance.

Combat

Operation Flaming Dart in February 1965 had been the first major combat event for the young VNAF. For its extraordinary heroism in combat during that and other operations, the 514th (formerly 1st) Fighter Squadron earned the US Presidential Unit Citation; only one other VNAF unit, a Helicopter Squadron, received this award during the war.²⁴⁵ VNAF combat effectiveness went beyond Flaming Dart, however. The combat experience of the 516th (formerly 2nd) Fighter Squadron exemplifies the record of the service as a whole in three operations: Operation Blackeye (1966), the Tet Offensive (1968), and the Easter Offensive (1972).

Operation Blackeye encapsulated the innovation of a growing air force. During the spring of 1966, Viet Cong raids around Da Nang harassed the RVNAF and risked the stability of the provincial government. Charged with searching for and destroying Viet Cong encampments, the 516th Fighter Squadron modified some of their four-seat A-1G fighter-bombers. These aircraft, recalled Mikesh, were “fitted with belly windows to allow an observer to lie on the floor on visual/armed reconnaissance missions.” Over three months, the squadron flew 237 such unusual

²⁴³ Tilford, *Setup*, 75.

²⁴⁴ Truong, *RVNAF and US*, 172.

²⁴⁵ Mikesh, *Flying Dragons*, 67.

missions. In May, when domestic political turmoil in Da Nang necessitated an increase in ARVN operations, the 516th pilots switched back to regular counterinsurgency operations, including close air support around the city.²⁴⁶

By the start of the Tet Offensive in late January 1968, the 516th Fighter Squadron had flown the A-1H for four years. The massive North Vietnamese assault signaled a shift to an offensive strategy aimed in part at taking Khe Sanh, a US Marine base in I CTZ not far from Da Nang. With two NVA divisions surrounding the area, it would be the first time the enemy had launched a coordinated attack on South Vietnamese cities. Starting on January 29, the VNAF flew three days of sustained strike missions to defend the base – 211 sorties the first day, 258 the second, and 368 the third. With A-1Hs from the 516th and F-5As from the newly-upgraded 522nd, the VNAF provided the entirety of allied airpower in the opening volley of the battle for Khe Sanh. When US aircraft joined the fight in early February, the VNAF continued to support the operation, with 1,300 strike missions in seventeen days, killing 600 NVA and Viet Cong soldiers.²⁴⁷ Donald Ward, in a USAF Air University study on VNAF A-1 operations, wrote that “opinions of [VNAF] effectiveness varied widely – from high praise to scathing condemnation.”²⁴⁸ From Mikesch’s perspective, the performance of the 516th had been invaluable:

There was little doubt that the VNAF had effectively contributed toward the defense of the RVN [Republic of Vietnam] during the Tet Offensive. It took the offense to the enemy, supported ARVN ground units capably, and achieved higher levels of strike performance, in terms of sorties flown and ordnance dropped, than previously.²⁴⁹

²⁴⁶ Mikesch, *Flying Dragons*, 86.

²⁴⁷ John Schlight, *The War in South Vietnam: The Years of the Offensive, 1965-1968* (Washington, DC: Office of Air Force History, 1988), 276-287; Bear, *VNAF Improvement*, 60; Sbraga, “Southeast Asia,” 452-457.

²⁴⁸ Donald Ward, *VNAF A-1 Operations, 1962-1968*, Corona Harvest Designated Study, AUC-42-68-ACSC (Maxwell Air Force Base, AL: Air Command and Staff College, 1969), 39, as quoted in Corum and Johnson, *Airpower in Small Wars*, 251.

²⁴⁹ Mikesch, *Flying Dragons*, 101.

On the eve of the 1972 Easter Offensive, the VNAF had over two hundred combat-ready fighter crews. Unfortunately, being Easter weekend, most of the force had received annual leave to visit families across Vietnam. By late March, the USAF presence in South Vietnam had shrunk to less than twenty thousand airmen, while the VNAF's forty thousand personnel enabled their service to account for 90 percent of all strike missions in the country.²⁵⁰ Even with thirteen hundred aircraft, according to USAF historian A.J.C. Lavalley, the VNAF was "a significant force numerically but in several respects unprepared for the all-out campaign now beginning."²⁵¹ The coordinated NVA invasion bore North Vietnam's last attempt to gain a position of advantage before ceasefire negotiations. The North Vietnamese crossed the demilitarized zone on March 30, 1972, with twelve divisions aiming for Quang Tri in I CTZ and a full corps pointed toward An Loc in II CTZ.²⁵² With an aggressive aerial response, the VNAF took an early lead in the counterinsurgency strike operations in the region around Da Nang in I CTZ. In a massive airpower response of eighteen thousand sorties over three months, the VNAF, USAF, and US Marine Corps successfully repelled the NVA advance on Hue and An Loc.

Success was not without cost, though, as increasingly dangerous anti-aircraft weapons, particularly shoulder-fired missiles, made sustained air operations untenable. The surface-to-air threat downed thirty-three aircraft, including ten VNAF aircraft.²⁵³ In the central highlands around Kontum in II CTZ, effective VNAF operations validated the training programs of Vietnamization. The senior USAF air advisor in the region noted that "sortie-for-sortie, the

²⁵⁰ A.J.C. Lavalley, *Airpower and the 1972 Spring Invasion*, USAF Southeast Asia Monograph Series, vol. 2, Monograph 3 (Washington, DC: Office of Air Force History, 1976), 1-12; Herman L. Gilster, *The Air War in Southeast Asia: Case Studies of Selected Campaigns* (Maxwell Air Force Base, AL: Air University Press, 1993), 63. Some sources, such as Lavalley, use the label "Spring Invasion" instead of "Easter Offensive."

²⁵¹ Lavalley, *1972 Spring Invasion*, 14.

²⁵² Mott, *Military Assistance*, 212.

²⁵³ Tilford, *Setup*, 230-232; Lavalley, *1972 Spring Invasion* 58; Mikesh, *Flying Dragons*, 110-111.

[VNAF] A-37 crews destroyed more communist tanks than did the Americans.”²⁵⁴ Between the two regions, the coordinated VNAF and USAF strikes had destroyed 618 gun positions, 521 anti-aircraft artillery, and 1,865 tanks and trucks, and killed – along with the contribution of ARVN ground forces – some forty thousand enemy soldiers.²⁵⁵

The success against the Easter Offensive of 1972, recalled the ARVN I Corps commander, demonstrated “that the RVNAF, with adequate US support, was capable of resisting the best efforts of the North Vietnamese Army.”²⁵⁶ Lieutenant General Dong Van Khuyen, Vietnam’s last chief of the Joint General Staff, described it as the RVNAF’s “greatest combat achievement.”²⁵⁷ Unfortunately for the South Vietnamese, that very success may have contributed to their later failure. In the months following the allied victories that year, the United States accelerated its disengagement schedule. The RVNAF, it appeared, had demonstrated its combat ability and readiness to sustain operations without US military assistance. Scholar James Willbanks judged that “the victory at An Loc provided the rationalization for complete withdrawal.”²⁵⁸ After one more period of hurried expansion, the VNAF and ARVN would soon be shouldered with complete responsibility for the defense of South Vietnam.

²⁵⁴ Lavalley, *1972 Spring Invasion*, 75. Quote attributed to USAF Colonel Peter Van Brussel. Another adviser in II CTZ, USAF Major Gordon E. Bloom, recalled that the “VNAF came into its own during the 1972 offensive. In the defense of Kontum the VNAF has been magnificent, absolutely magnificent.” See Lewis Sorley, *A Better War: The Unexamined Victories and Final Tragedy of America’s Last Years in Vietnam* (Orlando, FL: Harcourt Books, 1999), 338.

²⁵⁵ Gilster, *Air War in Southeast Asia*, 72.

²⁵⁶ Ngo Quang Truong, *The Easter Offensive of 1972*, Indochina Monographs (Washington, DC: US Army Center of Military History, 1980), 170.

²⁵⁷ Khuyen, *The RVNAF*, 380.

²⁵⁸ James H. Willbanks, “The Battle of An Loc, April 1972, and the American Contribution” (master’s thesis, University of Kansas, 1992), 112.

Their Own Air Force

In anticipation of a ceasefire, the US military embarked on a last, brief attempt to supply the RVNAF with combat equipment and personnel. Starting in late October 1972, Project Enhance targeted rapid fielding across the RVNAF. A supplemental program, Enhance Plus, brought in equipment for the air force. The impending ceasefire would prohibit future transfer of new war materiel, so the USAF rushed to handover to the VNAF all facilities, aircraft, and other property in South Vietnam. In just seven weeks, five thousand short-tons arrived by air and another ten thousand by sea. The nearly seven hundred aircraft transferred to the VNAF included approximately four hundred UH-1 helicopters from the US Army, all the A-1s remaining in the USAF and US Navy, thirty-two C-130s to fill two more air transport squadrons, and enough F-5As to equip three more fighter squadrons. The MACV plan for the VNAF Improvement and Modernization Program had projected forty operational squadrons. After Enhance Plus, the VNAF boasted fifty-four squadrons in late 1972.²⁵⁹ When the ceasefire went into effect after the signing of the Paris Peace Accords, January 27, 1973, the VNAF had reached its maximum strength: sixty-five squadrons, 2,075 aircraft, and 61,147 personnel. This swollen force had become the fourth largest air force in the world, after those of China, the United States, and the Soviet Union. However, observed Mikesh, “as impressive as this size may sound, it was comparable to an over-stuffed dragon, so large that it was almost incapable of moving.”²⁶⁰ After four years of Vietnamization, the VNAF had become “stretched to the limit by the combination of combat operations coupled with exponential growth.”²⁶¹ Sustaining such a swollen force would prove impossible.

²⁵⁹ Mikesh, *Flying Dragons*, 111-116; Tilford, *Setup*, 251; Khuyen, *The RVNAF*, 280; Sbrega, “Southeast Asia,” 465.

²⁶⁰ Mikesh, *Flying Dragons*, 116.

²⁶¹ Denehan, “Crickets to Dragonflies,” 1. Mikesh wrote that “the large number of aircraft given to the VNAF was completely beyond its capability to maintain... From the onset, it was

The VNAF, through eighteen years of US sponsorship and training, had become in many ways a facsimile of the USAF. Two decades earlier, the French had begun to develop a small-nation air force – ill-equipped but resourceful. By 1973, the VNAF culture had changed to that of a large-nation air force – well-equipped and expedient. The never-ending supply of aircraft parts and trained personnel had come to a screeching halt, and the VNAF airmen struggled to improvise.²⁶² In fiscal year 1974, the USAF delivered only \$700 million of the \$1.6 billion promised to the VNAF. By fiscal year 1975, the US money had all but disappeared. General Van Tien Dung, commander of the NVA noted that his South Vietnamese adversary, “without American help, was now relegated to fight a ‘poor man’s war.’”²⁶³ Making matters worse, the Vietnamese still thought like their former American benefactors. Lieutenant General Khuyen of the ARVN wrote that “US tactical influence still weighed heavily on all three services and could not be discarded overnight, particularly at a time of mounting enemy pressure.”²⁶⁴ In the months following the ceasefire, the NVA continued to deploy anti-aircraft weaponry into South Vietnam. By the summer of 1973, the VNAF had suffered twenty-two attacks from the Soviet-made portable SA-7 surface-to-air missile, resulting in eight aircraft losses. By the summer of 1974, the SA-7 had been deployed to all four corps tactical zones in South Vietnam and the VNAF had lost another nine aircraft to SA-7 hits and sixty-seven aircraft to anti-aircraft artillery fire. It was an air force much better suited for the close-in counterinsurgency fight of the Tet Offensive of 1968 rather than the non-permissive, conventional nationwide fight of 1974.²⁶⁵

understood that the VNAF would find it difficult to operate a force of over 2,000 aircraft.” Mikesch, *Flying Dragons*, 124.

²⁶² Cao Van Vien and Dong Van Khuyen, *Reflections on the Vietnam War*, Indochina Monographs (Washington, DC: US Army Center of Military History, 1984), 157; Mikesch, *Flying Dragons*, 9.

²⁶³ Willbanks, “Battle of An Loc,” 104-105; Khuyen, *The RVNAF*, 286.

²⁶⁴ Khuyen, *The RVNAF*, 23.

²⁶⁵ Mikesch, *Flying Dragons*, 123, 127-135.

By June 1974, the VNAF began crumbling. That summer, insufficient logistical support forced the grounding of ten operational squadrons. Fuel shortages caused a reduction of nearly 50 percent in flight hours at Da Nang, the home of the 516th Fighter Squadron. In December, the per aircraft sortie rate dropped from two sorties per day to less than half a sortie per day – one-third the rate supported during a similar period in the 1972 Easter Offensive. Stagnant supply lines and hindered intra-theater tactical airlift drove depot maintenance to a standstill. The increasingly hostile air environment prevented effective aerial reconnaissance, liaison, or forward air controller missions.²⁶⁶ As operations were grounded, pilots flew less, morale plummeted, and the ground troops' performance suffered without air support.

As the calendar turned to 1975, the North Vietnamese had deployed twelve fully-equipped NVA divisions inside South Vietnam. In March, the NVA took Ban Me Thout, a major stronghold in the central highlands, in just two days. From there, they turned north to Pleiku and Kontum in order to cut South Vietnam in half. Within a fortnight, the NVA had taken Da Nang, and “six of thirteen ARVN divisions simply disappeared with the South Vietnamese Air Force.”²⁶⁷ When the VNAF evacuated the airfield there, they abandoned 180 aircraft, including thirty-three A-37s of the 516th Fighter Squadron.²⁶⁸ In less than a month, the NVA marched down the east side of South Vietnam toward Saigon, taking one coastal city after another. By the time Xuan Loc – less than forty miles from Saigon – came under attack in mid-April, only ninety-two VNAF A-37s remained operational nationwide.²⁶⁹ There the VNAF valiantly supported the

²⁶⁶ Mikesh, *Flying Dragons*, 133-137.

²⁶⁷ Mott, *Military Assistance*, 218.

²⁶⁸ Robert F. Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1961-1984* (Maxwell Air Force Base, AL: Air University Press, 1989), 275; Willbanks, “Battle of An Loc,” 105-108.

²⁶⁹ Mikesh, *Flying Dragons*, 145-146.

ARVN's 18th Division in a desperate and successful defense against an entire NVA corps.²⁷⁰ Nonetheless, the effort did little more than slow the enemy advance to the capital. On April 30, 1975, the NVA entered Saigon and the war came to an end. In comparing that devastating defeat to the great successes just three years earlier, Willbanks explained that “the South Vietnamese had folded in less than 55 days... The same army that had been victorious with American help in 1972 could do nothing by itself.”²⁷¹ The same could be said of the South Vietnamese Air Force in its last days.

Observations from Case Studies

The underlying principle in the organization of air power is the creation of an air force capable of the greatest radius of action practicable under the conditions limited by personnel, material, and armament.

—William Mitchell, *Winged Defense*

The three case studies presented form a selective landscape of wartime flight training for partner nations. In building the Mexican Expeditionary Air Force, the USAF organized a very structured and intentionally limited training regimen. The training preceded combat, conducted in the peaceful environment of the United States while still preparing for the necessities of wartime. The United States worked with a Latin American partner and powerfully adapted its strategic relationship with Mexico. In instructing the Republic of Korea Air Force, the USAF undertook a hasty attempt to create basic combat capability at the squadron level – bounded to a single unit

²⁷⁰ George J. Veith and Merle L. Pribbenow II, “Fighting Is an Art: The Army of the Republic of Vietnam’s Defense of Xuan Loc, 9-21 April 1975,” *Journal of Military History* 68, no. 1 (January 2004): 163-213, accessed March 4, 2016, <http://www.jstor.org/stable/3397252>. Veith and Pribbenow recounted numerous examples of effective air-ground coordination between the VNAF and the ARVN. In one instance in late March 1975, however, an ARVN battalion was in retreat on the north side of Xuan Loc. Under heavy attack from NVA troops, the battalion commander requested close air support. The VNAF F-5Es that responded unfortunately dropped their bombs on the battalion’s position, in one of the few documented incidents of friendly-fire by VNAF aircraft (172).

²⁷¹ Willbanks, “Battle of An Loc,” 108.

like the MEAF, but less systematized. The training took place amid combat, conducted in an active operational conflict, with little distinction between training and combat missions. There, the United States revived a previous advisory relationship, working with an Asian partner in a familiar environment for conventional warfare. In developing the South Vietnamese Air Force, the USAF progressed through numerous phases, from passive BPC for counterinsurgency to active participation in conventional operations and then to extensive investment to prepare for stand-alone FID. The training was conducted both in the combat zone of Vietnam and in the United States, often based on time and resource availability. The United States partnered with an Asian nation with whom it had previously not worked, in an unfamiliar and often unconventional environment, yet after two decades developed a close and effective relationship, even if with disappointing final results.

While the United States will not again encounter these three identical situations, certain environmental conditions and some elements of these partner relationships are likely to reoccur. Given the strong prospect of needing to conduct future wartime flight training, observations should be drawn from these historical experiences that might guide future planning efforts. A successful wartime flight training program will anticipate the challenges of culture and language, foster robust political and institutional commitments with clear objectives, and develop a sustainable and integrated aviation force tailored to the combat requirements of the partner nation. The lenses used for the structured, focused comparison – culture, commitment, and combat – provide a framework through which to discuss these observations.

Culture

Future wartime flight training efforts should anticipate the challenges of culture and language. Each of the case studies highlighted the difficulty of technical training in a language other than the student's mother-tongue. Moreover, they demonstrated the importance of shared language between instructor and student – whether the students learned English, or the instructors

learned or already spoke the students' language. In every one of the cases, the training cadre at some point translated technical publications or reverted to visual aids to assist in on-the-job training. With the Mexico and Vietnam cases, the training in the end was conducted in the students' language; the USAF employed instructor-interpreters to teach the MEAF at Foster Field and Pocatello while the responsibility for training the VNAF eventually shifted to Vietnamese instructor pilots at Nha Trang during Vietnamization. In all three cases, training cadre purposely slowed down instruction schedules to permit language acquisition. As the Vietnam case was most successful of the three, in terms of technicality and quantity of training, its use of dedicated, formal English-language schools is instructive.

Even with language difficulties reduced, though, cultural barriers sometimes still hindered training. In his post-WWII history of ATC training, including that of the MEAF, Gerald White observed that many instructor pilots "failed to have a thorough and sympathetic understanding of differences in national temperament and consequently were apt to deal with foreign students in the same bluff, rough, and hearty manner they used in instructing U.S. cadets."²⁷² For Korea and Vietnam, as well, the attainment of language skills often did not eliminate all cultural misunderstandings, as exemplified in the VNAF lieutenant who struggled to learn the stall series in US-based flight training.

So, to anticipate the challenges of culture and language, the operational planner should:

- 1) dedicate time and resources to English-language training before flight training,
- 2) translate technical publications into the partner nation language, and
- 3) avoid the presumption that language capability equates to cultural understanding.

Commitment

Future wartime flight training efforts should foster robust political and institutional

²⁷² White, *Training of Foreign Nationals*, 74.

commitments with clear objectives. From a tactical perspective, all three cases might be considered successful; pilots from Mexico, South Korea, and South Vietnam all learned how to fly fighter aircraft in combat. From an operational perspective, however, the results of these training programs are more questionable. The operational attrition rate for Mexican and Korean pilots remained higher than those for similar USAF units in those wars, while the Vietnamese consistently struggled with integrating into the air-ground operation system. From a strategic perspective, the cases progressively decrease in success. The MEAF proudly carried their national colors to war and returned as heroes, the ROKAF satiated both Korean and US political leaders but did little to affect the war's strategy, and the VNAF built up successfully only to fold dramatically under pressure once abandoned by its sponsor nation. In the Mexico and Vietnam cases, well-structured flight training programs received demonstrations of commitment from every stage of command, even up to the presidential level. In all three cases, the US military demonstrated its institutional commitment to ensure the success of the flight training, even selecting instructors with deep personal devotion to the programs.

The key to effective military assistance lies in matching adequate resources to clear objectives. If self-sufficient counterinsurgency capability is the goal, then significant time and money should be spent on FID. If alliance interoperability is desired, then low-scale but targeted BPC would be more effective. If symbolic partnership is the aim, then strategic messaging might receive as much attention as technical or flight training. In any case, the US government will continue to use military assistance as a significant element of the political instrument. Secretary of Defense Robert M. Gates, in describing the US national defense strategy, explained that “our strategy is to employ indirect approaches – primarily through building the capacity of partner governments and their security forces – to prevent festering problems from turning into crises that

require costly and controversial American military intervention.”²⁷³ To make such indirect approaches effective requires a strong commitment, in policy, in resources, and in relationships.

So, to foster political and institutional commitments, the operational planner should:

- 1) communicate clearly the effects, costs, and risks of any proposed partner nation training programs, in order to help shape clear objectives,
- 2) align tactical training programs with strategic objectives to engender maximum possible levels of political and fiscal support, and
- 3) build military training institutions to facilitate strong institutional support.

Combat

Future wartime flight training efforts should develop a sustainable and integrated aviation force tailored to the combat requirements of the partner nation. In all three cases, the USAF failed to make the tactical capability of its partner nations operationally sustainable. Each of the newly trained air forces remained intricately tied to the USAF maintenance supply system, or in the case of Vietnam, at least in a USAF-like system reliant on donor resources. Each of the cases found long-term success when the formal training moved to schools in the United States, but each also relied on advanced pre-combat tactical training to prepare the pilots for that theater’s warfare. Only the MEAF effectively integrated into the tactical air control system, working well within General Kenney’s close air support structure in the Philippines. All three cases received aircraft capable of meeting their tactical requirements without being the most modern, high-technology platforms. Unfortunately, even the modest technology, when transferred in large quantities, can overwhelm the partner nation’s capacity for management, as Vietnam demonstrates.

²⁷³ Robert M. Gates, “The National Defense Strategy: Striking the Right Balance,” *Joint Force Quarterly*, no. 52 (1st Qtr 2009): 2-7, accessed 1 April, 2016, <https://lumen.cgscarl.com/login?url=http://search.proquest.com.lumen.cgscarl.com/docview/203634716?accountid=28992>.

The pitfall of many military assistance programs is trying to make the partner nation a facsimile of the donor nation. In a study of AvFID in Vietnam, Major Nathan A. White warned that “the USAF must avoid providing assistance in the way the service is most comfortable, but rather tailor the assistance and the manner of delivery to the needs of the assisted nation.”²⁷⁴

Planners should determine the size and purpose of the force and the level and capability of technology, and then ensure those means are sustainable in supply networks, tactical expertise, and financial investment. Generally, the simpler the better, since “developing nations tell us they require simple, inexpensive, easily operated and maintained systems.”²⁷⁵

So, to develop sustainable and integrated aviation forces, the operational planner should:

- 1) determine the size, purpose, and required technological capability of the intended air force, keeping in mind long-term sustainability,
- 2) build and train to fires integration capability, including tactical air control systems and air support operation squadrons, and
- 3) dedicate attention and resources to prepare the partner air force for self-sustainment.

Conclusion

Success is not contingent on being warriors alone; instead, military personnel must also be builders, diplomats, and guardians.

—Derek S. Reveron, *Exporting Security*

As the US Air Force refocuses on stealth technology, contested degraded operations, and deterrence, it still finds itself fully invested in the development of partner nation air forces. It is at the same time training to fight against near-peer adversaries and training the Afghan Air Force.

²⁷⁴ Nathan A. White, “Aviation Foreign Internal Defense in Vietnam” (master’s thesis, Air Command and Staff College, 2009), 28.

²⁷⁵ Richard Newton, “Reinventing the Wheel: Structuring Aerospace Forces for Foreign Internal Defense” (monograph, US Army Command and General Staff College, 1990), 27.

The future of warfare is not likely to be dichotomous – high-technology or low-technology, air superiority or close air support, manned or unmanned, physical or cyber, conventional or unconventional. Rather, to prepare for an uncertain future, the USAF must be prepared to partner with other nations in the use of airpower as an element of the political instrument of military force. Training partner nations to fly during times of exigency has long challenged the USAF, since “many of these problems arose from the extremely difficult challenge of balancing training with operational mission requirements in a developing air force engaged in round-the-clock operations.”²⁷⁶ This monograph examined cases of wartime flight training in the United States’ three longest wars of the Twentieth Century. The wars of the Twenty-first Century may include different allies and adversaries, may seek different strategic objectives, and may employ different tactics and tools of warfare. Appreciating those contingencies, though, operational artists ought to draw on historical continuities to derive observations for the future. To neglect the lessons of the past is to mortgage the future for the hubris of the present.

²⁷⁶ Corum and Johnson, *Airpower in Small Wars*, 251.

Bibliography

Government Documents

Air Force Doctrine Annex 3-2, *Irregular Warfare*. Washington, DC: Government Printing Office, 2013.

Joint Chiefs of Staff. JCS 1343. "Policy for U.S. Training Programs for Foreign Nationals." Report by the Joint Staff Planners and Joint Logistics Committee, May 10, 1945.

Joint Publication 3-22, *Foreign Internal Defense*. Washington, DC: Government Printing Office, 2010.

United States. *Foreign Relations of the United States, 1940: V, The American Republics*. Washington, DC: Government Printing Office, 1961.

———. *Foreign Relations of the United States, 1943: VI, The American Republics*. Washington, DC: Government Printing Office, 1965.

———. *Foreign Relations of the United States, 1944: VII, The American Republics*. Washington, DC: Government Printing Office, 1967.

———. *Foreign Relations of the United States, 1945: IX, The American Republics*. Washington, DC: Government Printing Office, 1969.

Official Histories and Reports

Berger, Carl, ed. *The United States Air Force in Southeast Asia, 1961-1973: An Illustrated Account*. Washington, DC: Office of Air Force History, 1984.

Conn, Stetson and Byron Fairchild. *The Western Hemisphere: The Framework of Hemisphere Defense*. Washington, DC: US Army Chief of Military History, 1960.

Cooling, Benjamin Franklin, ed. *Case Studies in the Development of Close Air Support*. Washington, DC: Office of Air Force History, 1990.

Craven, Wesley Frank and James Lea Cate, eds. *The Army Air Forces in World War II, vol. 5, The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945*. Chicago: University of Chicago Press, 1953.

Endicott, Judy G., ed. *The USAF in Korea: Campaigns, Units, and Stations, 1950-1953*. Washington, DC: Office of Air Force History, 2001.

Estep, Raymond. *United States Military Aid to Latin America*. Maxwell Air Force Base, AL: Air University, 1966.

Futrell, Robert F. *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1961-1984*. Maxwell Air Force Base, AL: Air University Press, 1989.

- . *The United States Air Force in Korea, 1950-1953*. Washington, DC: Office of Air Force History, 1983.
- . *The United States Air Force in Southeast Asia: The Advisory Years to 1965*. Washington, DC: Office of Air Force History, 1981.
- Hines, Jay E. *History of Foreign Training in ATC, 1941-1976*. ATC Historical Monograph. Randolph Air Force Base, TX: Air Training Command Office of History, 1977.
- Maurer, Maurer, ed. *Air Force Combat Units of World War II*. Washington, DC: Office of Air Force History, 1983.
- Momyer, William W. *Airpower in Three Wars (WWII, Korea, Vietnam)*. Edited by A.J.C. Lavalley. 1978. Reprint. Maxwell Air Force Base, AL: Air University Press, 2003
- . *The Vietnamese Air Force, 1951-1975: An Analysis of its Role in Combat*. Edited by A.J.C. Lavalley. USAF Southeast Asia Monograph Series, vol. 3, Monograph 4. Washington, DC: Office of Air Force History, 1975.
- Schlight, John. *The War in South Vietnam: The Years of the Offensive, 1965-1968*. Washington, DC: Office of Air Force History, 1988.
- United States Air Force. Second Air Force. Historical Section. *History of 201st Mexican Fighter Squadron, August 1944 through March 1945*. Maxwell Air Force Base, AL: Air Force Historical Research Agency.
- . Second Air Force. 72nd Fighter Wing. *History of the 201st Mexican Fighter Squadron (Majors Field), 6 August 1944 to 1 February 1945*. Maxwell Air Force Base, AL: Air Force Historical Research Agency.
- . Second Air Force. 72nd Fighter Wing. *History of the 201st Mexican Fighter Squadron (Majors Field), 1 February 1945 to 18 March 1945*. Maxwell Air Force Base, AL: Air Force Historical Research Agency.
- . Far East Air Forces. *201st Mexican Fighter Squadron*. Maxwell Air Force Base, AL: Air Force Historical Research Agency, October 19, 1945.
- . Fifth Air Force. V Fighter Command. *History of the 58th Fighter Group, Chapter 19, 1 May 1945 to 31 May 1945*. Maxwell Air Force Base, AL: Air Force Historical Research Agency.
- . Fifth Air Force. V Fighter Command. A-3 Section. *Twelve to One: Fighter Combat Tactics in the SWPA*, by Roy R. Brischetto. September 25, 1945.
- . Fifth Air Force. V Fighter Command. 58th Fighter Group. 201st Mexican Fighter Squadron. *Final Mission Reports, June-July 1945*. Maxwell Air Force Base, AL: Air Force Historical Research Agency. Microfilm.
- . Oral History Program. Oral History Interviews of Frank E. Merritt, Earle E. Partridge. Maxwell Air Force Base, AL: Air Force Historical Research Agency. Microfilm.

- . Pacific Air Forces. Directorate of Tactical Evaluation. Contemporary Historical Examination of Combat Operations (CHECO) Division. *Organization, Mission and Growth of the Vietnamese Air Force, 1949-1968*, by Oakah L. Jones, Jr. October 8, 1968, declassified July 18, 2008.
- . Pacific Air Forces. Directorate of Tactical Evaluation. CHECO Division. *Vietnamization of the Air War, 1970-1971*, by Drue L. Deberry. October 8, 1971, declassified July 18, 2008.
- . Pacific Air Forces. Directorate of Tactical Evaluation. CHECO Division. *The VNAF Air Divisions Reports on Improvement and Modernization*, by David H Roe, et al. November 23, 1971, declassified July 18, 2008.
- . Pacific Air Forces. Directorate of Tactical Evaluation. CHECO Division. *VNAF Improvement and Modernization Program*, by James T. Bear. February 5, 1970, declassified August 15, 2006.
- . Pacific Air Forces. Directorate of Tactical Evaluation. CHECO Division. *VNAF Improvement and Modernization Program, July 1971-December 1973*, by Thomas D. Desbrisay. January 1, 1975, declassified August 15, 2006.
- . Pacific Air Forces. Directorate of Tactical Evaluation. CHECO Division. *The War in Vietnam, July-December 1967*, by Lee Bonetti. November 29, 1968, declassified September 12, 2006.
- Ward, Donald. *VNAF A-1 Operations, 1962-1968*. Corona Harvest Designated Study, AUC-42-68-ACSC. Maxwell Air Force Base, AL: Air Command and Staff College, 1969.
- Warnock, A. Timothy, ed. *The USAF in Korea: A Chronology, 1950-1953*. Maxwell Air Force Base, AL: Air University Press, 2000.
- White, Gerald T. *Training of Foreign Nationals by the AAF, 1939-1945*. Army Air Forces Historical Studies, no. 64. Washington, DC: Air Historical Office, August 1957, declassified September 22, 1953.
- Y'Blood, William T. *Down in the Weeds: Close Air Support in Korea*. Washington, DC: Office of Air Force History, 2002.
- , ed. *The Three Wars of Lt. Gen. George E. Stratemeyer: His Korean War Diary*. Washington, DC: Office of Air Force History, 1999.

Monographs and Theses

- Bender, Jason M. "Advising Foreign Security Forces: Implications of Korea and Vietnam." Monograph, US Army Command and General Staff College, 2010.
- Brozenick, Norman J., Jr. "Another Way to Fight: Combat Aviation Advisor Operations." Report, Air Force Fellows Program, Air University, 2002.

- . “Small Wars, Big Stakes: Coercion, Persuasion, and Airpower in Counterrevolutionary Warfare.” Thesis, School of Advanced Airpower Studies, 1998.
- Childress, Michael. *The Effectiveness of US Training Efforts in Internal Defense and Development: The Cases of El Salvador and Honduras*. Santa Monica, CA: RAND, 1995.
- Childress, Timothy W. “Improving US Air Force Performance in Irregular Conflict: Reestablishing a USAF Special Air Warfare Center.” Thesis, School of Advanced Air and Space Studies, 2007.
- Collins, James Lawton, Jr. *The Development and Training of the South Vietnamese Army, 1950-1972*. Washington, DC: Department of the Army, 1975.
- Daley, Patrick. “Exporting Airpower: The Challenges of Building Partner Nation Air Capacity for Irregular Warfare.” Thesis, School of Advanced Air and Space Studies, 2008.
- Davis, Arthur D. “Back to the Basics: An Aviation Solution to Counter-Insurgent Warfare.” Thesis, Air Command and Staff College, 2005.
- Denehan, William. “From Crickets to Dragonflies: Training and Equipping the South Vietnamese Air Force, 1955-1972.” Thesis, Air Command and Staff College, 2007.
- Fernandez, Greg. “Mexico and Trilateral Air Defense, Is NORAD the Answer?” Strategy Research Project. Carlisle Barracks, PA: US Army War College, 2009.
- Gilster, Herman L. *The Air War in Southeast Asia: Case Studies of Selected Campaigns*. Maxwell Air Force Base, AL: Air University Press, 1993.
- Horwood, Ian. *Interservice Rivalry and Airpower in the Vietnam War*. Fort Leavenworth, KS: Combat Studies Institute Press, 2006.
- Khuyen, Dong Van. *The RVNAF*. Indochina Monographs. Washington, DC: US Army Center of Military History, 1980.
- Lavalle, A.J.C. *Airpower and the 1972 Spring Invasion*. USAF Southeast Asia Monograph Series, vol. 2, Monograph 3. Washington, DC: Office of Air Force History, 1976.
- Moroney, Jennifer D.P., Joe Hogler, Jefferson P. Marquis, Christopher Paul, John E. Peters, and Beth Grill. *Developing an Assessment Framework for U.S. Air Force Building Partnerships Programs*. Santa Monica, CA: RAND, 2010.
- Newton, Richard. “Reinventing the Wheel: Structuring Aerospace Forces for Foreign Internal Defense.” Monograph, US Army Command and General Staff College, 1990.
- Purdham, Aldon, Jr. *America’s First Battles: Lessons Learned or Lessons Lost?* CADRE Paper No. 16. Maxwell Air Force Base, AL: Air University Press, 2003.
- Ramsey, Robert D., III. *Advice for Advisors: Suggestions and Observations from Lawrence to the Present*. Global War on Terrorism Occasional Paper 19. Fort Leavenworth, KS: Combat Studies Institute Press, 2012.

- . *Advising Indigenous Forces: American Advisors in Korea, Vietnam, and El Salvador*. Global War on Terrorism Occasional Paper 18. Fort Leavenworth, KS: Combat Studies Institute Press, 2007.
- Tilford, Earl H., Jr., *Setup: What the Air Force Did in Vietnam and Why*. Maxwell Air Force Base, AL: Air University Press, 1991.
- Truong, Ngo Quang. *The Easter Offensive of 1972*. Indochina Monographs. Washington, DC: US Army Center of Military History, 1980.
- . *RVNAF and US Operational Cooperation and Coordination*. Indochina Monographs. Washington, DC: US Army Center of Military History, 1980.
- Tudor, William G., “Flight of Eagles: The Mexican Expeditionary Air Force Escuadrón 201 in World War II. PhD diss., Texas Christian University, 1997.
- Vega Rivera, José G. “The Mexican Expeditionary Air Force in World War II: The Organization, Training, and Operations of the 201st Squadron.” Thesis, Air Command and Staff College, 1997.
- Vick, Alan J., Adam Grissom, William Rosenau, Beth Grill, and, Karl P. Mueller. *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions*. Santa Monica, CA: RAND, 2006.
- Vien, Cao Van and Dong Van Khuyen. *Reflections on the Vietnam War*. Indochina Monographs. Washington, DC: US Army Center of Military History, 1984.
- White, Nathan A. “Aviation Foreign Internal Defense in Vietnam.” Thesis, Air Command and Staff College, 2009.
- Willbanks, James H. “The Battle of An Loc, April 1972, and the American Contribution.” Thesis, University of Kansas, 1992.

Books

- Bledsoe, Marvin. *Thunderbolt: Memoirs of a World War II Fighter Pilot*. New York: Van Nostrand Reinhold Company, 1982.
- Cline, Howard F. *Mexico: Revolution to Evolution, 1940-1960*. London: Oxford University Press, 1962.
- . *The United States and Mexico*. New York: Atheneum, 1963.
- Corum, James S. and Wray R. Johnson. *Airpower in Small Wars: Fighting Insurgents and Terrorists*. Lawrence, KS: University Press of Kansas, 2003.
- Domínguez, Jorge I. and Rafael Fernández Castro. *The United States and Mexico: Between Partnership and Conflict*. 2nd ed. New York: Routledge, 2009.

- Edwards, Paul M. *Combat Operations of the Korean War: Ground, Air, Sea, Special, and Covert*. Jefferson, NC: McFarland & Company, 2010.
- Gaddis, John Lewis. *The Landscape of History: How Historians Map the Past*. Oxford: Oxford University Press, 2002.
- George, Alexander L. "Case Studies and Theory Development: The Method of Structured, Focused Comparison." In *Diplomacy: New Approaches in History, Theory, and Policy*, edited by Paul Gordon Lauren, 43-68. New York: The Free Press, 1979.
- Gruenberg, Leif A. *Defining Moments: The Korean War*. Detroit, MI: Omnigraphics, 2004.
- Hallion, Richard P. *The Naval Air War in Korea*. Baltimore, MD: Nautical and Aviation Publishing Company of America, 1986.
- Hess, Dean E. *Battle Hymn*. New York: McGraw-Hill, 1956.
- Hovey, Harold A. *United States Military Assistance: A Study of Policies and Practices*. New York: Frederick A. Praeger, Inc., 1965.
- Jackson, Robert. *Air War Over Korea*. New York: Charles Scribner's Sons, 1973.
- Kenney, George C. *General Kenney Reports: A Personal History of the Pacific War*. New York: Duell, Sloan, and Pearce, 1949.
- Kupferer, Anthony J. *No Glamour... No Glory! The Story of the 58th Fighter Group of World War II*. Dallas, TX: Taylor Publishing Company, 1989.
- Ky, Nguyen Cao. *Buddha's Child: My Fight to Save Vietnam*. New York: St. Martin's Press, 2002.
- . *Twenty Years and Twenty Days*. New York: Stein and Day, 1976.
- Mecham, J. Lloyd. *The United States and Inter-American Security, 1889-1960*. Austin, TX: University of Texas Press, 1961.
- Mikesh, Robert C. *Flying Dragons: The South Vietnamese Air Force*. Atglen, PA: Schiffer Military History, 2005.
- Millett, Allan R. *The War for Korea, 1950-1951: They Came from the North*. Lawrence, KS: University Press of Kansas, 2010.
- . *Their War for Korea: American, Asian, and European Combatants and Civilians, 1945-1953*. Washington, DC: Brassey's, Inc, 2002.
- Mott, William H., IV, *Military Assistance: An Operational Perspective*. Westport, CT: Greenwood Press, 1999.
- Neuman, Stephanie G. *Military Assistance in Recent Wars: The Dominance of the Superpowers*. New York: Praeger Publishers, 1986.

- Reveron, Derek S. *Exporting Security: International Engagement Security Cooperation and the Changing Face of the U.S. Military*. Washington, DC: Georgetown University Press, 2010.
- Rossi, Peter H., Mark W. Lipsey, and Howard E. Freeman. *Evaluation: A Systematic Approach*. 7th ed. Thousand Oaks, CA: Sage Publications, 2004.
- Von Clausewitz, Carl. *On War*. Edited and translated by Michael Howard and Peter Paret. Princeton: Princeton University Press, 1976.
- Wilson, Jeremy. *Lawrence of Arabia: The Authorized Biography of T.E. Lawrence*. New York: Atheneum, 1990.
- Sorley, Lewis. *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam*. Orlando, FL: Harcourt Books, 1999.
- Stoker, Donald, ed. *Military Advising and Assistance: From Mercenaries to Privatization, 1815-2007*. New York: Routledge, 2008.

Other Sources

- Calvo, Dana. "The Saga of the Aztec Eagles." *Los Angeles Times Magazine*, July 25, 2004.
- Gates, Robert M. "The National Defense Strategy: Striking the Right Balance." *Joint Force Quarterly*, no. 52 (1st Qtr 2009): 2-7. Accessed 1 April, 2016. <https://lumen.cgscarl.com/login?url=http://search.proquest.com.lumen.cgscarl.com/docview/203634716?accountid=28992>.
- Schwab, Stephen I. "The Role of the Mexican Expeditionary Air Force in World War II: Late, Limited, but Symbolically Significant." *Journal of Military History* 66, no. 4 (October 2002): 1115-1140. Accessed January 15, 2016. <https://lumen.cgscarl.com/login?url=http://search.proquest.com.lumen.cgscarl.com/docview/195639371?accountid=28992>.
- Turbiville, Graham H., Jr., "U.S. Military Engagement with Mexico: Uneasy Past and Challenging Future." JSOU Report 10-2. Hurlburt Field, FL: Joint Special Operations University Press, 2010.
- Veith, George J. and Merle L. Pribbenow II. "Fighting Is an Art: The Army of the Republic of Vietnam's Defense of Xuan Loc, 9-21 April 1975." *Journal of Military History* 68, no. 1 (January 2004): 163-213. Accessed March 4, 2016. <http://www.jstor.org/stable/3397252>.