Professional Military Education for Air Force Officers: Comments and Criticisms

Richard L. Davis, Lt Col, USAF
Frank P. Donnini, Lt Col, USAF

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the 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 this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **JUN 1991**	2. REPORT TYPE **N/A**	3. DATES COVERED **-**
4. TITLE AND SUBTITLE **Professional Military Education for Air Force Officers: Comments and Criticisms**		5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) **Richard L. Davis; Frank P. Donnini**		5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Air Univ, Maxwell AFB, AL**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		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		
15. SUBJECT TERMS **United States. Air Force - Officers - Education; Military education - United States**		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**SAR**	**138**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Professional Military Education for Air Force Officers: Comments and Criticisms

ARCHIVE COPY

Edited by

RICHARD L. DAVIS, Lt Col, USAF
FRANK P. DONNINI, Lt Col, USAF

Air University Press
Maxwell Air Force Base, Alabama

June 1991

Library of Congress Cataloging-in-Publication Data

Professional military education for Air Force officers : comments and criticisms / edited by Richard L. Davis, Frank P. Donnini
p. cm.
Includes bibliographical references and index.
1. United States. Air Force—Officers—Education. 2. Military education—United States. I. Davis, Richard L., 1947– . II. Donnini, Frank P.
UG638.P76 1991
358.4'007'073—dc20 91-15110
CIP

DISCLAIMER

This publication was produced in the Department of Defense school environment in the interest of academic freedom and the advancement of national defense-related concepts. The views expressed in this publication are those of the editors and do not reflect the official policy or position of the Department of Defense or the United States government.

This publication has been reviewed by security and policy review authorities and is cleared for public release.

To those who think

Contents

Chapter		Page
	DISCLAIMER	ii
	FOREWORD	ix
	ABOUT THE EDITORS	xi
	PREFACE	xiii
1	CONTEXT AND BACKGROUND	1
	Inception Phase, 1946–50	2
	Trans- and Post-Korean War Phase, 1950–57	3
	Post-Sputnik Phase, 1958–65	5
	Vietnam War Phase, 1965–74	7
	Post-Vietnam War Phase, 1974–79	8
	Defense Resurgence Phase, 1980–87	9
	Summary	10
	Notes	11
2	EVOLUTION OF PROFESSIONAL MILITARY EDUCATION DOCTRINE FOR AIR FORCE OFFICERS	17
	Purpose of Air Force Professional Military Education	17
	Original Intent	18
	Stated Purpose	20
	Broad versus Specialized Education	21
	Air University's Professional Military Education Charter	25
	Original Charter	26
	Informal Guidance	27
	Changes in Air University Regulations	30

Chapter *Page*

Defining Air University's Goals for Professional Military Education 31
School Curricula and Mission Statements 35
Air War College 36
Air Command and Staff College 38
Squadron Officer School 42
Notes 44

3 COMMENTARY ON AIR UNIVERSITY, 1946–87 51
Commentary, 1946–67 51
Faculty 51
Curriculum, Educational Philosophy, and Teaching Methods 54
Research 56
Student Selection Procedures 57
Funding 59
Commentary, 1968–87 60
Faculty 60
Curricula 64
Nonresident Professional Military Education 75
Teaching Methods 77
Criticism of Criticisms 81
Board of Visitors 82
Air Force Educational Requirements Board Task Group 83
Self-Development 84
Notes 85

Chapter *Page*

4 REFLECTIONS ON PROFESSIONAL MILITARY EDUCATION FOR AIR FORCE OFFICERS 95
Professional Military Education and Its Environment 95
Professional Military Education's Foundation: Defining the Officer Corps 96
Professional Military Education Successes and Failures 98
Recommendations 100
Conclusion 103
Notes 103

BIBLIOGRAPHY 105
INDEX 119

Illustrations

Table

1 Evolution of Air War College Curricula 36

2 Evolution of Air Command and Staff College Curricula 40

3 Evolution of Squadron Officer School Curricula . . . 42

Foreword

Professional military education (PME) has played an important part in the career development of US Air Force officers since the USAF became a separate military service in 1947. Although PME is now well established and considered successful, the system has drawn much criticism over the years. In an attempt to produce a reference source for future evaluations of PME, a special study team at Air University's Airpower Research Institute undertook an objective examination of the evolution of professional education in the Air Force. Their research, begun in 1987, ranged over hundreds of primary documents and yielded a vast amount of information, both historical and analytical. This book, edited by two members of the original team, is a distillation of more than 40 years of PME appraisals that were unearthed by the larger study.

Such valuations—caustic as well as complimentary—are presented here in the belief that they are ultimately beneficial to PME. If the aim of Air Force professional education is to produce capable officers, then it should be flexible enough to accommodate changes which pursue that goal. Readers of this book will discover that PME continues to serve the best interests of the Air Force because of—rather than in spite of—the steady gaze of critical eyes.

DENNIS M. DREW, Col, USAF
Director
Airpower Research Institute

About the Editors

Lt Col Richard L. Davis is currently assigned as US air attaché in Kinshasa, Zaire. He is a former B-52 aircraft and flight commander, serving in various flying and staff positions in the 320th Bombardment Wing, Mather AFB, California, and the 43d Bombardment Wing, Andersen AFB, Guam. He has also served as a military doctrine analyst at the Airpower Research Institute, Air University Center for Aerospace Doctrine, Research, and Education (AUCADRE), Maxwell AFB, Alabama, and as a political-military affairs officer, advising on military space operations and security at USAF Space Division, Los Angeles, California. Colonel Davis holds a BA degree in history from the University of Redlands and an MA degree in international affairs from California State University, Sacramento. He is a graduate of Squadron Officer School, Air Command and Staff College, and Air War College. He has authored a college text on the employment of air power in World War II and has written several articles on Air Force PME and Air Force doctrine.

Lt Col Richard L. Davis

Lt Col Frank P. Donnini is the targets division chief on the intelligence staff, Headquarters Tactical Air Command, Langley AFB, Virginia. Previously, he served as an international political-

Lt Col Frank P. Donnini

military affairs officer at the Airpower Research Institute, AUCADRE, Maxwell AFB, Alabama. He is a career intelligence officer whose previous assignments include exchange officer duty with the Royal Australian Air Force and independent study as an Air Force research associate at the Graduate School of Public and International Affairs, University of Pittsburgh. Colonel Donnini holds a bachelor's degree in history from Union College and master's degrees in public administration and international relations from Golden Gate University and Creighton University, respectively. He is a candidate for a doctoral degree in public administration from the University of Alabama. Colonel Donnini is a graduate of Squadron Officer School, Air Command and Staff College, and Air War College. Author of several publications, he has recently completed a book on the Australia, New Zealand, and US (ANZUS) treaty defense alliance, to be published by the Air University Press.

Preface

This study is based on an examination of professional military education (PME) for United States Air Force officers that was conducted in 1988 at the Airpower Research Institute (ARI), Air University Center for Aerospace Doctrine, Research, and Education (AUCADRE), Maxwell AFB, Alabama. The original study researched the history and evolution of the Air Force's PME system, assessed the current status of Air Force PME, and compared the PME systems of the other US military services to that of the Air Force. This extract, however, restricts itself to the history of Air Force PME between 1946 and 1987. Originally, seven ARI officers, including the editors of this study, worked on the project. Collectively, they examined more than 345 documents—letters, regulations, manuals, studies, reports, catalogs, and histories—in an effort to fully understand the criticisms made of Air Force PME throughout its history.

The capstone of Air Force PME is Air University (AU), located at Maxwell Air Force Base. AU consists of three schools: Squadron Officer School, Air Command and Staff College, and Air War College. During the more than 40 years examined here, PME became thoroughly institutionalized. Further, the quality of professional education offered by AU was constantly assessed and reassessed. External observers (those outside the Air Force) and internal observers (both military and civilian, assigned from within the Air Force) regularly examined the qualifications and teaching methods of the schools' faculty, as well as the schools' curricula. Throughout this period, PME's purpose was the subject of ongoing discussion: whether it should provide broad or specialized instruction and whether it should address only military issues or include political and related topics. These questions remain unanswered because the Air Force has never effectively defined what it wanted its officers to know or to be.

Although the assessments described in this book are not exhaustive, they are representative of both internal and external

commentary over the entire four-decade period. Internal criticism is especially difficult to assess since it is often only implicit in recommendations for changes made by the various groups that conducted studies of PME. In addition, internal Air Force reviews of AU and the schools tended to become less critical as the schools became institutionalized, thus making an objective assessment even more difficult. On the other hand, external criticisms—particularly those from non-Department of Defense observers—were prone to find fault with PME. These evaluations were more likely to be explicitly critical, often bluntly so, and they too were perhaps not wholly objective. This study seeks a balance between the two types of criticisms and attempts to determine how they complement each other.

Indeed, the authors themselves must confess to a certain prejudice. It was not possible to pursue the original study from a totally detached point of view. We feel that education in general and PME in particular should play an important role in the professional development of competent military leadership. The selection of subjects to be taught, the scope of coverage, and the sequence of courses of study are matters that reasonable people should debate. However, failing to pursue the most applicable and appropriate solutions produced by such debates or accepting a particular approach simply because it is "the way it has always been done" might have unfortunate consequences for national security. These sentiments were expressed by Maj Gen Muir S. Fairchild, AU's first commanding general, speaking to the AU Board of Visitors in 1946:

> Whether a man has gone very far in higher education is not too important, as long as he is a simple buck pilot. But when he gets to a position of greater age, rank and responsibility, those deficiencies [a lack of good professional education] we feel are apt to show up markedly, resulting in a more or less mediocre senior officer level.

We would like to thank the people who worked with us on the original AUCADRE PME study: Col Jeffrey C. Benton; Lt Cols Richard B. Clark, Jr., Harvey J. Crawford, and Bernard D. Claxton; and Maj Thomas C. Blow. A very special thanks to our mentors, Col Dennis M. Drew and Dr David MacIsaac. We also appreciate the assistance of Dr Marvin Bassett, our editor at AU Press, and

the helpful people in the press's Production Division. Finally, a humble debt of gratitude to all the people who have studied the question of officer PME so diligently in the past. We found ourselves in distinguished company.

RICHARD L. DAVIS
Lt Col, USAF

FRANK P. DONNINI
Lt Col, USAF

Chapter 1

Context and Background

From 1946 to 1987, various study groups made over 120 distinct assessments of the Air Force professional education program. Commentaries ranged from casual references to comprehensive analyses of philosophy, definitions, and objectives for officer professional military education (PME). Initially, the Air Force sought to produce a professional officer corps that was not only educated and aware of wartime techniques and doctrine but also proficient in the skills necessary to handle the technological complexities of modern war. Consequently, Air University (AU) was chartered to manage both a postcommission military education system, designed to provide broad knowledge to all officers, and the Air (later Air Force) Institute of Technology, designed to offer college degrees in specialized subjects.

Although most people seemed to agree that a broad education for the officer corps was highly desirable, criticisms of AU and its procedures over the years reveal significant difficulties in obtaining qualified faculty, designing effective and appropriate curricula, procuring the best students, and maintaining sufficient budget priority for PME. This study surveys the specific criticisms of AU's attempts to secure effective professional education for Air Force officers. Toward that end, chapter 1 takes a historical approach in summarizing key PME studies and conferences, as well as developments at Air University. Chapter 2 addresses the purpose of PME from an Air Force perspective and traces the evolution of both PME and school curricula. Chapter 3 deals with the specific studies and criticisms of AU and its programs. Finally, chapter 4 offers a few observations about officer PME, particularly with regard to commentary that has gradually evolved and may be styled a "doctrine" of PME.

Inception Phase, 1946–50

In 1946 the Gerow board (named for its chairman, Lt Gen Leonard T. Gerow) established baseline standards for postwar professional military education. Tasked to determine educational requirements, the board felt that in-depth instruction in all aspects of national security was the central purpose of PME. Thus, the board recommended a five-tiered educational structure: two schools at the national level and three managed by the services. Officers would progress sequentially through company grade, intermediate, and senior service schools and then finish their education with the joint and national political perspectives offered by an armed forces college and a national security university, respectively. The goal was to educate only the best officers, providing each with a general knowledge of the entire military establishment and a broad understanding of political-military affairs. Interestingly, an officer was to complete PME by age 45 "in order to have commanders and staffs of a useful age for any future war."[1]

As the newest service, the Air Force responded enthusiastically to the spirit of the Gerow proposals. Air Force leaders believed strongly that their service was unique. This conviction was especially true of Maj Gen Muir S. Fairchild, the first commander of AU, and of Maj Gen David M. Schlatter, the first deputy commanding general for education at Air University. These officers reflected this spirit of uniqueness by patterning their PME program after a university system, making the Air Force the only service to do so. They also established three general goals for Air Force education: (1) to provide officers with the narrow technical specialization to do their jobs, (2) to educate officers in the broad context of national security issues, and (3) to encourage forward thinking, unhampered by tradition.[2]

Many initial AU concerns involved the facilities and resources necessary to accommodate Air Force officers in sufficient numbers. In an effort to educate as many officers as possible, the Air Force set annual attendance quotas for its PME schools. Due

to limited facilities, however, none of the schools was able to meet these quotas for nearly a decade. Thus, to augment the educational process and encourage self-instruction, the Air Force developed correspondence courses and a professional reading program very early.[3] AU also had to compete for personnel and resources when the Army Air Forces (AAF) was reorganizing and expanding to 55 combat groups. This situation created problems with regard to faculty quality and tenure. Indeed, the procurement and retention of "great teachers" were common concerns during the early years.[4]

The inception phase ended in 1950 with a military education board chaired by General Fairchild urging the continuation of formal education for all active duty officers with regular commissions. The average officer at the end of World War II had about one year of college.[5] The Air Force wanted to elevate this standing to at least the baccalaureate level. Hence, a major focus of the Fairchild board was to enhance degree-granting opportunities, including the expansion of Air Institute of Technology programs and the possible accreditation of Air War College (AWC) and/or Air Command and Staff School (ACSS), each of which had resident programs of 10 months' duration. The board also set PME school attendance targets: 100 percent of all officers to attend Air Tactical School (ATS), 60 percent to attend ACSS, and 25 percent to attend AWC. It admitted, though, that the targets were "desirable, but probably unrealistic," hoping they might be met by the end of 1951.[6]

Trans- and Post-Korean War Phase, 1950–57

By the fall of 1950, the mobilization requirements of the Korean War interrupted much of the groundwork laid by General Fairchild and the others working with him. The time for completing studies at both ACSS and AWC was reduced from 10 to five months in order to meet the increased demand for graduates. However, the effort to provide the same level of learning to more people in a shorter time period diluted the quality of education. As the AU Board of Visitors (BOV) put it, reduction in course length without

a careful balancing of curriculum "precludes [the] possibility of reflective thinking."[7]

One man who did reflect on such problems was Ralph W. Tyler, an analyst and educator working under contract to the Air Force in 1955. Tyler reviewed the workings of all three Air Force PME schools and tried to provide a basic guideline for planning and conducting AU programs. He concluded that the Air Force lacked clear, consistent goals and objectives for PME primarily because "a comprehensive, authoritative statement of the philosophy of Air University has not yet been put in writing."[8] This observation was not new, having been made earlier by Dr Jacob S. Orleans in a report covering the educational program at ACSS in 1949 (Orleans report).[9] The Tyler study, though, was important enough to be the point of departure for the Air Force Educational Requirements Board (AFERB) Task Group efforts of 1962–63.

As the Korean War wound down, AU resumed year-long ACSS and AWC courses but continued to have problems with recruiting and keeping good faculty. This difficulty was largely due to Air Force efforts to build and maintain an operational force of 137 wings. Faculty tours rarely reached the desired three-year length, a problem even AU's efforts at selective manning failed to solve.[10]

In 1956 the Air Force conducted its sixth major study of education, chaired by Gen E. W. Rawlings, commander of the Air Materiel Command.[11] Typical of study groups of the period, the Rawlings board focused more on general education than PME. Nevertheless, the study proposed "to critically examine" officer PME and assess its adequacy, organization, objectives, methods, and (implicitly) the system's ability to meet the Air Force's requirements for quality officers. The study also assessed precommissioning programs, recommending, for example, that AU manage the new US Air Force Academy (USAFA) to ensure consistency in pre- and postcommission education. In Rawlings's view, existing officer-education levels and the number of PME graduates were still grossly deficient. Board members believed that producing a well-educated officer should be "a long term development of high priority." In addition, all officers should have at least a baccalaureate degree, the board said.[12]

Post-Sputnik Phase, 1958–65

The third phase began with the Department of Defense (DOD) Reorganization Act in 1958 and was initially colored by the post-Sputnik (October 1957) call for more engineers and scientists. In this setting, the technical problems accompanying the Air Force's change from bombers to missiles became a key concern of the Power board, the eighth major Air Force conference addressing educational requirements. Chaired in November 1959 by Gen Thomas S. Power, then commander in chief of the Strategic Air Command (SAC), this board felt that expanded and better-tailored engineering and scientific studies were important Air Force goals. Yet, significantly, the board also encouraged broad service experience and a solid education in general military principles. Its members noted that strengthening operational units and enhancing technical skills were necessary activities, but they quickly added that the Air Force is "not overemphasizing the liberal arts and social sciences." Rather, the Air Force "might not be making enough effort in these fields." The board's report also reflected continuing concern over faculty quality and urged that both broad and specialized education be integrated over an officer's entire career. It agreed that all officers needed baccalaureate degrees but disagreed with the Rawlings board's recommendation that AU run the USAF Academy.[13]

In 1961 Headquarters USAF in Washington, D.C., directed the AFERB to determine the needs of Air Force PME. In turn, the board appointed a task group, which began work in January 1962 and submitted a final report in July 1963 (subsequently amended in December 1963 at the behest of Headquarters USAF).[14] The report defined PME and identified its objectives:

> [PME is] the systematic acquisition of theoretical and applied knowledge which is of particular significance to the profession of arms. It involves the acquisition of knowledge, skills and attitudes which are requisite to military professionalism and which form the core of understandings which must be common to all officers, regardless of the specialized activities in which they may be engaged. . . . It is directed to the officer's

> thorough understanding of national goals and objectives and the ways and means of utilizing military force to achieve them. [PME] is separate and distinct from specialized education and training.

Thus, for the first time, the Air Force had an official philosophy of PME. The report also described a professional Air Force officer as

> an expert in the profession of arms, particularly as pertains to aerospace power. He understands the nature of war and is proficient in the art of waging it under any condition. He is a leader of men in both peace and war, and he is accomplished in utilizing his knowledge and skills in organizing and managing resources. . . .
>
> He participates in specialized education, as well as specialized training, and he employs this continuing preparation, in conjunction with professional military education, in order to be able to assume greater responsibilities as he progresses in his military career.
>
> The professional Air Force officer recognizes that he must continually expand his knowledge and understanding of the art of war.[15]

Significantly, the task group felt that the 1958 DOD Reorganization Act directly affected perceived PME needs by fostering increased emphasis on joint operations and interservice cooperation.[16] The task group's report of 1963 had an impact on the Air Force PME system as significant as that of the 1946 Gerow board: the schools' curricula soon changed, and key portions of the report evolved into a revised Air Force Manual (AFM) 53-1 (later Air Force Regulation [AFR] 53-8), *USAF Officer Professional Military Education System.*

Although a key document, the report of the AFERB task group did not address all aspects of PME. From 1961–64 study groups produced at least 32 other distinct assessments of Air Force PME, ranging from occupying the time of SAC's missile launch control officers to enhancing the English skills of students at Air Command and Staff College (ACSC, formerly ACSS) and Squadron Officer School (SOS).[17] Most of these studies were descriptive rather than analytical, but some had very specific complaints and recommendations. One internal AU study, for example, noted that the PME system was producing officers who

lacked both professional proficiency and the ability to handle problems at higher staff levels.[18]

Meanwhile in 1962, at the request of the 18th BOV, AU developed a 10-year plan for officer education that covered the period 1963–73. This plan sought to provide an outline and rationale for PME goals and attempted to integrate the latter's requirements with those of special education and graduate studies. The plan recommended an increase in the quota of students taking PME in residence and the completion of PME as a prerequisite for promotion to appropriate grades.[19] Furthermore, it formally shifted the emphasis away from educating only regularly commissioned officers, sought to require a baccalaureate degree as a prerequisite for commissioning, and hoped to make the PME curriculum more flexible and to raise faculty quality. The BOV heartily endorsed the plan.[20]

Vietnam War Phase, 1965–74

The advent of the war in Southeast Asia (SEA) brought the third phase to a close. This conflict—the second of two "military emergencies," as the Board of Visitors termed the Korean and Vietnam wars—also prompted a 50-percent decline in resident attendance at AU, distracted observers from significant PME analysis, and slowed the pace of Air Force PME studies. However, various agencies still made a number of critiques and assessments, the most significant of which was an *Officer Education Study*, completed by the Office of the Assistant Secretary of Defense for Manpower in July 1966. This three-volume report extensively reviewed officer education policies for all the services and addressed baccalaureate requirements, graduate education, and both the pre- and postcommissioning needs of officer PME. PME itself was considered in four levels: entry (precommissioning) and first, second, and third professional (corresponding to AU's SOS, ACSC, and AWC, respectively).[21]

The *Officer Education Study* concluded that among all officers, those in the Air Force valued PME the least, especially compared

to Army officers. In addition, the Air Force (along with the Navy) was educating too few officers at the intermediate level. The study's main recommendations included an increase in the number of graduates at the senior and intermediate PME levels, more objective criteria for determining the length of PME courses, and the inclusion of true electives for resident education at the intermediate and senior levels. Although a valuable and comprehensive study, the report's impact on the services' PME systems appears in retrospect to have been small, possibly because of the military focus on the war in Southeast Asia.

Toward the end of the conflict, a routine review of Air Force PME unintentionally affirmed certain conclusions made by the *Officer Education Study*. In 1973 Maj Gen Lawrence S. Lightner headed a board to assess curriculum and faculty activities at Air University. This board concluded that the role of history in Air Force military education should be downplayed in favor of general current events, that lectures should be improved and made the central part of the educational experience, and that the faculty should not be given time for independent research or study.[22] These suggestions affected Air Force PME programs throughout the 1970s.

Post-Vietnam War Phase, 1974–79

The end of the war brought a renewed interest in PME from a variety of quarters, as shown by a sudden surge in the number of internal studies and external criticisms of all the services' PME programs.[23] The criticism was not new, but because of the general disenchantment with the military at the time, it proved particularly biting and at least prompted senior Air Force leaders to take note.

The 1975 DOD Committee on Excellence in Education (called the Clements committee after its chairman, Deputy Secretary of Defense William Clements) attempted to set the stage for postwar education and training. The committee's conclusions, published in two reports, were directive in nature and were signed by the secretaries of the Army, Navy, and Air Force. The first report stated

that the nation's war colleges must "provide officers whose career experience has been largely operational or specialized an opportunity to place their role as military men into a broader and more balanced perspective."[24]

To this end, the committee felt that all the war colleges should have a common core curricula, including study of the DOD decision-making process, formulation of national security policy, management skills, and national and international environment.[25] The intermediate (or staff-level) service schools should focus midlevel officer education on "the achievement of professional competence and expertise in the command doctrine, staff and operations of their particular Service."[26] Finally, since faculty quality had noticeably deteriorated during the war, new faculty candidates at both the intermediate and senior levels should meet a screening board prior to selection.[27] For AWC, the committee's suggestions led to increased emphasis on research and electives tailored more to student experience. ACSC, meanwhile, was to increase the number of air warfare studies and emphasize specific war-fighting concerns of the Air Force. Both schools should teach the information and skills necessary in mastering the positions to which students would be assigned upon graduation.[28] Military thinking on PME retained this general position well into the 1980s.

Defense Resurgence Phase, 1980–87

As the Air Force entered the 1980s, questions about effectively educating officers for war remained unanswered, despite all the previous commentary. For a while, the Air Force mixed broad and specialized education by placing AU under Air Training Command (1979–83). Air Force-sponsored reviews or inspections frequently praised AU and its school curricula and programs, but dissatisfaction with the results of the war in Southeast Asia and the Desert One rescue attempt in Iran (1980) prompted many people to seriously question the quality of PME. Symptomatic of this concern in the Air Force were Project Warrior (1982), which encouraged officers to pursue their own professional reading and

study, and the Joint Flag Officer Warfighting Course (1986), designed to expose new generals to key techniques for conducting the art of war. An objective observer might wonder why such informal professional education was necessary if institutional PME programs were truly doing their job.

Two studies had a strong effect on Air Force PME during this phase. Sponsored by AU in February 1980, the *Officer PME Study* dealt with what should be taught to Air Force officers. It stressed the need for more strategic planning in the curricula, especially at ACSC, and lamented the fact that specified knowledge levels were not prerequisites for resident professional education.[29] Five years later, at the behest of Secretary of the Air Force Verne Orr, the Air Force conducted the *PME Faculty Enhancement* study. As the title suggests, the study group members concerned themselves with a single issue: the qualifications and effectiveness of the AU faculty. The study addressed faculty recruitment, training, education, evaluation, and image. Its two most important recommendations called for a better civilian-military mix at ACSC and AWC and a reduction in the number of so-called plowbacks, PME graduates held over to be instructors on the schools' faculty.[30] The long-term effects of both of these studies still await further analysis.[31]

Summary

The studies outlined in this chapter reflect the types of assessments made of Air University and its mission between 1946 and 1987. Each study or analysis during this period garnered a wide range of responses; in the main, however, concerns about faculty, curricula, and other fundamental questions recurred with annoying regularity. Much of the confusion stemmed from the fact that the Air Force has been vague about its purpose for PME. Chapter 2 addresses in detail how Air University's charter has evolved since 1946 and the effect this evolution has had on PME school curricula.

Notes

1. See *Report of War Department Military Education Board on Educational System for Officers of the Army* (Washington, D.C.: War Department, 5 February 1946), 3–5, 9, 13, 25, 52, and annexes 4–12. The three Air Force service schools originally included Air War College (AWC) for colonels and lieutenant colonels, Air Command and Staff School (ACSS) for majors, and Air Tactical School (ATS) for junior officers. ACSS became Air Command and Staff College (ACSC) in 1954. ATS became Squadron Officer Course (SOC) in 1950 and operated as a subdivision of ACSS/ACSC until becoming the independent Squadron Officer School (SOS) in 1959.

2. *Forward thinking* and *great teachers* (see note 4) were key buzzwords of the period. See *First Report of the Board of Visitors* (Maxwell Field, Ala.: Air University, Spring 1946), 11, 20 (hereafter, BOV 1); see also *Proceedings of the Educational Advisory Staff Conference, July 11–12, 1947* (Maxwell Field, Ala.: Air University, 1947), 12. The first educational conferences on administration and structure of the new Army Air Forces (AAF) School took place in 1946. See *Report of the Army Air Forces Educational Conference* (Maxwell Field, Ala.: Army Air Forces School, 18–20 February 1946); and *Report of (Second) AAF Educational Conference* (Maxwell Field, Ala.: Air University, 20–22 August 1946).

3. BOV 2 (1947): 19; BOV 3 (January 1948): 33. For example, in 1947 all 18,000 officers were supposed to attend Air Tactical School at some point. The school, which conducted four classes per year, was able to handle only 700–750 students per class. By 1953 ATS had to deal with the "management and development of 23,600 regular and 60,000 reserve career Air Force officers." See *Report of the University System Board*, vol. 3 (Maxwell AFB, Ala.: Air University, 1 September 1953), tab M, 1.

Correspondence courses and an official Air Force reading program still exist. The Extension Course Institute at Gunter AFB, Alabama, manages the former, parroting the curriculum of the three major PME schools. The initial reading list was titled "A Guide for Professional Reading by Air Force Officers," unpublished but circulated in June 1947. It became a formal Air Force pamphlet (variously numbered), ultimately covering 12 major subject areas and having over 300 titles by the early 1960s. In 1963 the AU Historical Division assumed management of the list. It languished there until 1972, when the AU curriculum office reduced it to a small handout with 25 titles. Now titled the *Air University Suggested Professional Reading Guide* (Maxwell AFB, Ala.: Air University, 1990), it is still in use, updated every other year or so.

4. BOV 2 (1947): 29–30, 51–55.

5. BOV 1 (1946): 12.

6. *Report of the USAF Military Education Board on the Professional Education System for USAF Officers* (Maxwell AFB, Ala.: Air University,

24–25 January 1950), 19–26. BOV 6 (1950) also discusses the accreditation issue (page 2). By 1960 the Air Staff decided that accreditation was unnecessary; however, AU's commander again raised the issue in 1967 for consideration by the Board of Visitors. See BOV 16 (1960): 3; George N. Dubina, *Air University Board of Visitors: A Brief Analytical History, 1946–1968*, Air University Historical Division Study Series, no. 28 (Maxwell AFB, Ala.: Air University, December 1968), 34–36; and Lt Gen Walter E. Todd, commander, Air University, to Air Force Combat Command Staff, Headquarters USAF, letter, subject: Sixteenth Report of the Board of Visitors, 20 June 1960, 2 (filed with BOV 16 [1960]).

7. BOV 3 (January 1948): 4; BOV 7 (1951): 8. Only during academic year 1951–1952 did AWC run two five-month courses. At all other times the course has been 10 months in length.

8. Ralph W. Tyler, *Analysis of the Purpose, Pattern, Scope, and Structure of the Officer Education Program of Air University*, Project no. 505-040-0003 (Maxwell AFB, Ala.: Officer Education Research Laboratory, May 1955), 6, 138. Tyler wryly noted, "The purpose of [this] report will not have been served if it is merely filed" (page 2).

9. *A Report to the Commanding General, Air University, of an Educational Survey of the Air Command and Staff School* (Maxwell AFB, Ala.: Air University Human Resources Research Institute, 1 September 1949), 9, 16, 37. Dr Orleans was a professor of education at City College, New York, and director of research and evaluation for the college's Committee on Coordination of Teacher Education. The AU commander asked him to analyze and evaluate the educational program at ACSS in light of the ACSS mission. However, Orleans recognized that his conclusions were relevant to education at AU as a whole and affected all three schools. In particular, he noted (1) that there was too much stress on keeping pace with new developments and not enough on substantive education and (2) that "the education of Air Force officers should be considered a continuous process" (pages 15, 17ff.).

10. See reports of the BOV from 1952–1957, passim. BOV 12 (1956) is typical and well reflects the general problems of this period. With regard to faculty manning, ACSC appeared to be hardest hit: average tours were as short as 15 months. See BOV 5 (1949): 4–5.

11. Between 1946 and 1987, various groups prepared 16 major reports on Air Force PME: AAF Educational Conferences (February and August 1946), Educational Advisory Staff Conference (1947), Fairchild board (1950), University System board (1953), Rawlings board (1956), Carmichael study (1958), Power board (1959), Qualitative Educational Requirements Symposium (1960), Educational Requirements Board Task Group (1962–1963), Officer Education Study (1966), Lightner board (1973), Task Group Alpha (1974), Clements committee reports (1975–1976), Officer PME Study (1980), and the PME Faculty Enhancement Study (1985). These reports were in addition to those of the annual Board of Visitors and the AU 10-year plan (1963–1973, cf.

note 19), plus numerous other studies, theses, and dissertations of narrower scope.

12. *Report of the USAF Educational Requirements Conference* (Maxwell AFB, Ala.: Air University, 8 November 1956), 4, 18, 65. Interestingly, the report adds, "The distinguishing mark of a profession is a system of education, rather than training, that it sets up to instruct its members in its principles, ideals, and broad understandings" (page 5).

13. *Report of the USAF Educational Conference, 17 November 1959* (Maxwell AFB, Ala.: Air University, December 1959), 1–12. These references are to the executive summary, which is well cross-referenced to the body of the report.

14. In 1959 AU acquired the Air Force Educational Requirements Board (AFERB), governed by AFR 53-26, *Air Force Educational Requirements Board*, 12 December 1958. This standing board was headed by a major general who reported directly to the AU commander. Its primary purpose was to ensure a balance between officers' college degrees and their corresponding Air Force specialty codes (AFSC), but the board was occasionally used for ad hoc assessments—the function of the group mentioned here. This group was chartered to "identify and describe qualitative educational requirements for (1) *specialized professional education* [and] (2) *professional military education.*" It very quickly focused solely on PME. See Air Force Educational Requirements Board, *Report on Professional Military Education*, vol. 1 (Maxwell AFB, Ala.: Air University, 10 July 1963), 1-1 (hereafter, task group report).

15. Ibid., 3-2, 3-3. The report also includes the definition, philosophy, and objectives of PME (pages 3-3 to 3-9; see also chapter 2 of this study). The AFERB Task Group conducted an exhaustive study; it carefully reviewed all previous major studies and Board of Visitors reports and outlined PME deficiencies (pages 2-4 to 2-13).

16. The AFERB Task Group stressed the importance of knowing one's own service first but added that such knowledge should facilitate senior leadership in an increasingly joint environment. According to the group, "The intent of the Reorganization Act of 1958 and subsequent changes [as well as] the many recent decisions concerning strategy and major weapon systems by the OSD [Office of the Secretary of Defense] and many other such actions, clearly illustrate the thrust toward further centralization, standardization, unification, planning and control at higher levels" (task group report, 1A:13-14). Thus, PME must partly "be of a broadening military nature, designed to help prepare officers to plan for, employ weapons, and perform necessary supporting actions in joint, unified or combined conditions" (page 13).

17. Good summaries of these studies, as well as most significant PME assessments made between 1946 and the early 1980s, are found in two unpublished documents available in the Air University Library: Maj Glen A. Kendrick, "Annotated Bibliography of Research on the USAF Professional Military Education (PME) System," Report no. 1300-80 (Maxwell AFB, Ala.:

Air Command and Staff College, May 1980); and Maj Daniel P. Bangs, "A Survey of Studies on Factors Affecting Air Force Professional Military Education," Report no. 86-0190 (Maxwell AFB, Ala.: Air Command and Staff College, 1986).

18. Col Ralph W. Keller, Air Force deputy chief of staff for education (DCS/Education), to Maj Gen Charles H. Pottenger, vice commander, Air University, letter, subject: Structure of the Professional Military Education System, 26 April 1963, 3–4. The attachment to this letter was an ad hoc, in-house study entitled "Factors Involved in Determining the Appropriate Structure of the Professional Military Education System."

19. See Air University DCS/Education, *Air University Plan for the Development of Air Force Professional Education, 1963–1973* (Maxwell AFB, Ala.: Air University, March 1963), 1, 18 (hereafter, AU 10-year plan). In addition to PME, this document covered general and specialized education, student selection, language training, research, curriculum, methodologies, and more. Its objective for PME was "to raise the professional military educational level of the Officer Corps to the extent that 100 per cent will have military education appropriate to their ranks" (page 8). The 18th Board of Visitors, chaired by Dr Gordon Sproul, University of California, requested that the plan be developed. This board was concerned about the quality of PME and split into two groups. One assessed the general Air Force PME program, and the other addressed the question of conducting pure research at AU. The former group recommended that a 10-year plan be developed. BOV 18 (1962): 5.

20. AU 10-year plan, 11–12, 16, 24, 50–51. The reports of the 19th and 20th Boards of Visitors endorsed the AU plan. Both BOVs particularly liked the increased school quotas. BOV 19 (1963): 7; BOV 20 (1964): 5.

21. Office of Assistant Secretary of Defense for Manpower, *Officer Education Study*, 3 vols. (Washington, D.C.: Department of Defense, July 1966). For a discussion of PME, see vol. 2:136–86, 297–355.

22. Maj Gen Lawrence S. Lightner, *Review of Air War College and Air Command and Staff College* (Maxwell AFB, Ala.: Air University, March 1973), 12, 19–20, 32.

23. The most significant formal studies were *Report of the Task Study Group Alpha* (Maxwell AFB, Ala.: Air University, 29 June 1974); DOD Committee on Excellence in Education, *The Intermediate Level Staff Colleges: Conclusions and Initiatives* (Washington, D.C.: Government Printing Office, 1 December 1976) (hereafter, Clements committee, ILSC); DOD Committee on Excellence in Education, *The Senior Service Colleges: Conclusions and Initiatives* (Washington, D.C.: Government Printing Office, 5 June 1975) (hereafter, Clements committee, SSC); and USAF Deputy Chief of Staff for Personnel, *Report of a Study on Officer PME Policy* (Washington, D.C.: Government Printing Office, March 1976). For a typical criticism from a nonmilitary source, see Maureen Mylander, "Graduate School for the Generals," *Washington Monthly*, October 1974, 42–52.

24. Clements committee, SSC, 2.

25. Ibid., 3–6.

26. Clements committee, ILSC, 1.

27. Clements committee, SSC, 7–11; Clements committee, ILSC, 6–7.

28. Clements committee, SSC, 5–6, 11–12; Clements committee, ILSC, 9–10.

29. *Officer PME Study* (Maxwell AFB, Ala.: Air University, February 1980), 16, 30, 114–15; and *Officer PME Study*, atch 1, *Supporting Documents* (Maxwell AFB, Ala.: Air University, February 1980), 14-5.

30. Air University Task Force and Blue Ribbon Committee on Air University Faculty Improvement, *PME Faculty Enhancement: Combined Report* (Maxwell AFB, Ala.: Air University, February–March 1985), 3, 5–7, 16.

31. The latest iteration in the long history of commentary on Air University is the report of the House Armed Services Committee, Panel on Military Education, chaired by Rep Ike Skelton. Focusing on the service schools' capability to give officers a perspective on joint operations, many of its views coincide with those of earlier studies. The Skelton committee report, however, was not released until April 1989 and thus is outside the purview of this history.

Chapter 2

Evolution of Professional Military Education Doctrine for Air Force Officers

Before examining specific criticism of PME faculty, curricula, and teaching methods, one must understand the purpose or doctrinal basis of PME in order to evaluate the validity of criticism directed against it. However, the Air Force has had difficulty in formulating a clear-cut purpose for PME, a situation reflected by questions that have dogged the system since its inception. Should PME, for example, be oriented toward broad or specialized education? Should it concentrate on the entire spectrum of national security issues or exclusively on military—perhaps just air power—issues? The historical record indicates that the Air Force has not answered these questions completely. Indeed, the Air Force is not even sure what an officer is. As we have seen in chapter 1, a formal definition of Air Force officership exists, but it is very broad and basically unworkable from the standpoint of designing effective PME curricula. Consequently, the perceived purpose of PME has undergone constant change.

Purpose of Air Force Professional Military Education

One may observe an evolutionary process at work as various individuals and study groups sought to clarify PME's raison d'être, as originally conceived. The impetus for change was also fueled by controversy over the scope of education provided by PME.

Original Intent

The founders of Air University had specific ideas about AU's basic mission. Gen David Schlatter, deputy commanding general for education at AU, succinctly expressed this doctrine to the AU Board of Visitors in July 1946 and again in November 1947:

- The purpose of the armed forces and the Air Force is to preserve the peace.
- The ultimate utility of air power is to force enemy surrender by direct, sustained strikes against vital centers.
- AU must orient all instruction on the future, pursue forward thinking, and resist conservatism. Officers must be molded with the "ability and capability for fundamental, original thought."
- AU is to pursue two educational objectives: (1) provide techniques and tools to command and (2) guide future, objective thinking.
- AU is to foster global thinking, using polar maps.
- AU is to foster continuous study and developmental thinking in science and technology.
- AU is to find and develop great teacher types for its faculty and to improve liaison with non-Air Force schools.
- AU is to continually reassess and update AU education programs and, by implication, Air Force educational needs.
- AU is to assist in the revival of an active air defense doctrine.[1]

The goal of Gen Muir S. Fairchild, General Schlatter, and others was to provide commanders with a "broad knowledge of the economic, political, and international setting" of national problems. This objective could be achieved only "by starting early and continuing through life a general study of men and affairs that is both deep and comprehensive."[2] Most observers throughout the period clearly supported this position and felt that Air Force officers needed career-long, if not lifelong, education. For example, the Orleans report (1949) stressed that the education of officers should be a continuous process. Similarly, the Rawlings board (1956) urged that the long-term development of a

well-educated officer corps should be a high priority. And a study conducted by Dr R. Gordon Hoxie (1964) insisted that military education for career officers should be a constant, continuing process.[3]

The Board of Visitors strongly recommended the inclusion of PME in officers' career plans and suggested that the Air Force Institute of Technology (AFIT) train technicians and that AU provide education in the social sciences to planners and staff officers.[4] The board added a blunt caveat: Although the lack of a good technical education might limit the ability of Air Force officers to exploit future possibilities, the lack of a good general education would adversely affect the quality of their leadership over the long term.[5] Most importantly, then, AU should "reduce the influence of prejudice . . . develop a natural urge to inquisitiveness [and] weed out . . . the narrow facts of technology in favor of broader principles."[6] Failure to encourage a broad educational perspective for Air Force leaders could have dire consequences for national security:

> It is quite clear that our national security becomes ever more dependent on the minds of men rather than their brute strength. Particularly is this evident in the United States Air Force which is faced with periodic crises and realignments of power politics as well as tremendous technological advances that constantly modify its mission, its capabilities, and its operations. Accordingly, the importance of Air University to the Air Force and to the nation annually becomes more vital. . . . It is essential that every effort be made to maintain and enhance academic vitality for it is one of the keys to the enormous advantages of gaining the future first.[7]

Unfortunately, the idea of promoting intellectual vitality in an academic setting is difficult to sell within the military. As Frederick H. Hartmann noted in the mid-1970s, a basic criticism of all US war colleges is that they "are not taken seriously enough by the senior uniformed and civilian defense personnel."[8]

Stated Purpose

In 1967 the *Air University Objective Plan* pointed out that

> the purpose of PME is to provide programs of education which will increase the officer's ability to think creatively, solve problems in a logical and systematic manner, prepare military studies and plans, and make clear, meaningful, and logical oral and written presentations. Further, PME programs must develop leadership attributes and create the desire for individual self-improvement. The accomplishment of those purposes is the goal of Air Force professional military education. Air University must provide the means to meet the PME goal through the resident and non-resident courses of instruction, research, and publication of articles and documentary studies.[9]

In 1975 Lt Gen F. Michael Rogers, AU commander, wanted to ensure that the Air Force Education Requirements Board understood that the Air Force's advanced academic degree program allowed student officers "to gain specific expertise required by a specific position." On the other hand, he noted that PME provided "a progressive program of education to enhance the professional competence of the students by broadening their perspectives and preparing them to assume responsibilities at higher levels of command and staff duties."[10] Later that year General Rogers reiterated his belief in the expansive nature of PME in an article for *Air University Review*: "To make sure that the officer's knowledge beyond his specialty is not limited, as often happens in other professions, PME imparts attitude, knowledge, and skills on the art of warfare and national security to all officers."[11]

The 1976 *Report of a Study on Officer PME Policy* by the Air Force deputy chief of staff for personnel stated that PME is

> the acquisition of theoretical and applied knowledge of the profession of arms, including the knowledge, skills, and attitudes requisite to military professionalism which form the core of understanding common to all officers. It also includes that specific knowledge of military arts and sciences and command and staff expertise required in peace and war. For the Air Force, PME focuses on the theory and application of aerospace power.[12]

This report reasons that

> the quality of leadership is related to the education in command and leadership principles and the efficiency and productivity of staffs is influenced by the collective education and training of the staff as a whole. The knowledge acquired through the deliberate study of the employment of airpower is important. This accumulated knowledge in the application of airpower is a factor in determining the readiness of the force to conduct combat operations. Therefore, as the number of officers educated in the profession of arms increases, the quality and readiness of the Air Force as a whole increases. The logical outcome of this approach is that all officers should complete all levels of PME in residence. However, since all officers cannot do so and since some are not well qualified, PME should be reserved for those with the greatest potential and promise for higher level appointments.[13]

Broad versus Specialized Education

In 1975 the Clements committee stressed the importance of a broad education for military officers. The war colleges were to be "wellsprings of professional thought, through which officers can develop and expand their technical and professional military expertise."[14] Toward this end, the war colleges should have a common core curriculum and a tailored electives program. More importantly, mission-specific subjects (aerospace warfare for the Air War College) should "constitute approximately one-third of the total."[15] The core curriculum might change from time to time (e.g., it could include subjects only marginally connected to national defense), but the committee recommended consistency in the study of aerospace warfare's

> historical basis, fundamental principles, current ramifications, relationship to associated fields, and future implications—to include those for strategy and tactics [for the purpose of developing an] executive mind-set: a frame of reference which recognizes complexity and uncertainty in issues but provides the perspective to work through them to find solutions. [This perspective would] reinforce the effort of each college to strengthen its position as a recognized and respected center of intellectual excellence to which professional officers are attracted for study, and to which scholars are attracted to teach and conduct research.[16]

Despite the specificity of the Clements committee's directives and taskings, the committee failed to recognize the antipathy of the military toward broad education. By tasking the services to implement both broad and specialized education, the committee probably ensured that the latter would predominate. The armed forces prefer specialized instruction; broad education is so unusual to them that they often have trouble recognizing it. This problem is at least partially responsible for the difficulty that Air University and Air Training Command (ATC) have in sorting out their respective roles and missions. Indeed, AU was even assigned to ATC as a subordinate organization from 1979–83. It goes without saying that the services' inability to make this distinction has drawn much criticism.

In 1984 Professor I. B. Holley, Jr. (a retired major general in the Air Reserve), of Duke University wrote a personal letter to Lt Gen Thomas C. Richards, AU commander, that attempted to resolve this dilemma by arguing that AWC should accomplish its mission "to prepare selected officers for future assignment in senior staff and command positions" through broad rather than specialized education. He defined the former as "instruction for the cultivation of the mind, enlarging a student's understanding by opening new vistas and by sharpening his skills in processing information." Like John Henry Newman, Holley advocated a liberal education for the thinking man. According to Holley, "The principle *objective* of an Air War College education should be to prepare students to define problems in an environment of complexity and uncertainty, to seek and to comprehend a range of alternative solutions, and to perfect the analytical skills needed to reach preferred solutions." Thus, tinkering with the curriculum will not make a difference, but offering a course of study that helps students develop their ability to think will make a considerable difference.[17]

Lt Gen William R. Richardson, commander of the US Army Training and Doctrine Command, expressed similar sentiments when he delivered the Kermit Roosevelt Lecture in England that same year. Richardson noted that between the world wars, men like Gen George C. Marshall and Gen Omar N. Bradley profitably used their time to study and to teach. Undoubtedly, their diligence

favorably affected the outcome of World War II. Since then, however,

> a generation of officers was taught that the study of leadership, tactics, strategy and military history was an embellishment rather than the proper focus of military education.
>
> At staff colleges and war colleges, courses in tactics, strategy and planning were pushed aside by courses on management, political science and psychology.
>
> The consequences of these trends have been twofold. First, insufficient attention has been given to the intangible human qualities so critical in war. Second, officers have wrongly been taught that technology is more important on the battlefield than tactics.
>
> But the crux of the problem [in Vietnam] was that our schools were not teaching officers how to think, plan and decide.
>
> Today we must emphasize how to think rather than what to think.[18]

The services have not been completely obtuse about the difference between broad and specialized education, at least on the theoretical level. Such is not the case in practice, however, especially when budgets have been tight. For example, in 1976 when a proposal threatened to reduce the time spent at ACSC to five months, Lt Gen Kenneth L. Tallman (Air Force chief of staff for personnel) wrote to Gen David C. Jones (Air Force chief of staff) that "the five-month course would [have to] focus more narrowly on developing staff skills applicable at MAJCOM or higher level."[19] A year later, a staff summary sheet noted that

> whereas the current [10-month] ACSC program aims to prepare officers broadly for roles as staff action officers, mid-level supervisors, and small-unit commanders, the main focus of the 5-month course would be on the action officer role. Coverage of supervisor and commander responsibility would be reduced sharply, though not eliminated.[20]

The controversy continued into 1978. In April of that year, Vice Adm Patrick J. Hannifin sent a memorandum to the secretary of defense that argued against initiatives to reduce the course length of the staff colleges to 22 weeks. He wrote that the Joint Chiefs of

Staff concluded that shortening the courses of study was not feasible because

> the colleges would be reduced to stamping out staff technicians qualified in staff procedures and broad political principles but lacking a deep and thorough understanding of the tactical and strategic application of the military forces associated with their parent Service. The fact that US doctrine, both tactical and strategic, is up to date, known and understood by the US officer corps, and tested in exercises and war games is directly attributable to the professional military education system.[21]

Interestingly, though, ACSC had recently added

> 100-hour "specialty tracks" tailored to the student's next assignment. The specialty track instruction is designed to reduce or eliminate the time required for students to transition to the responsibilities and requirements of their next job assignment.[22]

Typical of the trend toward specialized education were remarks by the 1980 *Officer PME Study*:

> The USAF Occupational Measurement Center is administering an Air Force–wide occupational survey to determine leadership, managerial, and communicative tasks performed by officers at various phases in their career. This project is designed primarily to help validate and revise the curricula of all Air Force officer PME schools.[23]

Such activities were commonplace, despite the fact that only four years before, a *Report of a Study on Officer PME Policy* by the Air Force's deputy chief of staff for personnel noted that

> in military matters, PME performs a broadening function. It prepares officers for a variety of roles in complex organizations, not to perform specific jobs. . . . It is also inappropriate to determine PME requirements by specific positions.[24]

Obviously, the scope of PME was the subject of considerable contention. Indeed, some people—such as Brig Gen John E. Ralph, former commandant of SOS—found themselves torn between the two choices:

> We leave too little time and place for attention to specific military functions. As a profession, the military must comprehend the great issues of our society and accommodate its internal plans and structure to the guidance received from the leaders of our society in responding to these issues. While we in the military cannot neglect the great issues, neither can we dwell on them at the expense of functional proficiency. A meager, irrelevant or vague education in the area of combat employment will diminish military effectiveness. There is no alternative, no substitute for professional proficiency.
>
> It does not seem very likely that the military will collapse and fail the nation because of its marginal knowledge of social issues. It is far more likely that the military will falter and fail the nation because of its inability to meet demands of combat.
>
> I believe that the general thrust of Air Force professional education, particularly for the junior officer, experienced a phase which was too esoteric, too anxious to treat the officer as if he were on the threshold of a career breakthrough to the National Security Council, too ready to stimulate his expectations and dilute his interest in combat itself, its history, its technical evolution, and its leadership demands. Education for combat roles is not available in any other setting. I think it important for young officers to be conversant with the great issues, to be fluent spokesmen for their personal and professional interests. It is wrong, however, to give this ancillary aspect of professional life such emphasis that it feeds later frustration and impatience.[25]

Thus, the Air Force's perception of the purpose of PME is nebulous at best. Air University, however, felt somewhat more confident about the nature of its mission, by virtue of having a written charter. Nevertheless, that charter was subject to considerable change.

Air University's Professional Military Education Charter

The ideas that led to the creation of Air University's PME charter antedate the school itself. This study assumes that the original charter was in place on 3 September 1946, the date when the first Air Force PME classes opened. The charter has continued

to evolve since that time and has shaped the development of formal courses that educate officers in the profession of arms.[26]

Original Charter

AFR 53-8, *USAF Officer Professional Military Education System*, defines PME as "the systematic acquisition of theoretical and applied knowledge of the profession of arms."[27] The roots of this definition and the perceived role of PME date back to the Air Service School, which was formed in 1920 at Langley Field, Virginia. The school's name was changed to the Air Corps Tactical School (ACTS) six years later, and in 1931 it moved to Maxwell Field, Alabama. There, ACTS faculty continued to develop concepts and doctrines of air power and imparted that knowledge to the Army Air Forces officer corps. The military buildup that preceded World War II led to the closing of ACTS on 29 June 1940. However, its graduates and faculty went on to demonstrate the value of the principles of air power that were developed at the school.

As World War II drew to a close, the Army began to consider the kind of postwar military education system that best suited its purposes. Following a number of studies and memoranda, the War Department issued an order on 19 November 1945 to establish the Army Air Forces School at Maxwell Field.[28] The original tasking was later incorporated into Army Air Forces Regulation (AAFR) 20-61, *Organization, AAF School*, dated 4 January 1946, which directed the AAF School to conduct three major courses of study: AAF Tactical Course, AAF Command and Staff Course, and Air War Course.[29] On the recommendation of the Gerow board, the AAF School was redesignated Air University and its three divisions renamed the Air Tactical School, the Air Command and Staff School, and the Air War College, effective 12 March 1946.[30] AAFR 20-61 reflected this change in a revision dated 5 April 1946.[31] Furthermore, the revision said that AU would "be responsible for continuous study of the AAF educational and training system for officers, to insure a progressive system, that all

essential fields of education and training are included, and that no duplication exists."[32]

When Air University opened on 3 September 1946, the school's official tasking consisted of nothing more than a list of schools for which it was responsible and a vague direction to continue to study the Air Force educational system.[33] Thus, the founders of AU had little direction to help them build a PME program.

Informal Guidance

However, less formal guidance in the form of memoranda, letters, and speeches was available to the leaders of Air University. In a memorandum for the president of the Army Air Forces Board, dated 9 August 1945, Maj Gen Donald Wilson—commander of the AAF Proving Ground Command at Eglin Field, Florida, and a former teacher and theorist at ACTS—directed the board to conduct "a first priority study" aimed at establishing an AAF postwar school system. General Wilson's memo included several assumptions:

> The basic concept for all instruction shall be to develop initiative and resourcefulness. Education shall begin with a specialty. Personnel shall, in general, continue with that specialty until elimination from the service or selection for greater responsibilities which will be assigned to those persons who demonstrate the fundamental characteristics of good judgment, initiative, common sense, and the over-all ability to evaluate a problem and effect the best solution.[34]

Similarly, a memorandum of 8 November 1945 from Maj Gen C. C. Chauncey, deputy chief of the Air Staff, concerning AU administrative matters, included a philosophy of instruction:

> Initially and in the future, traditionalism, rigidity of thought and doctrines, and the formalization of instruction must be carefully avoided. The whole effort of instruction must be to prepare students for future wars and not for past wars.[35]

Lt Gen Ira C. Eaker, deputy commander of AAF, echoed this sentiment in a memorandum of 20 December 1945 for General

Fairchild: "Please try to set up a school system which will be forward-looking and not backward-looking." Eaker also wanted AU to emphasize public relations and air intelligence in its curriculum.[36]

Other types of correspondence augmented the information found in the above memoranda. In a letter dated 27 March 1946 to various leaders of civilian colleges requesting their participation on the Air University Board of Visitors, Gen Carl A. Spaatz, commanding general of AAF, outlined his concept of AU's PME charter:

> The purpose of the institution is to provide postgraduate education for Air Force officers in order to improve their professional capabilities and knowledge, to widen their vision and to insure forward-thinking and adequate leadership for Air Forces, both in peace and war.[37]

Later that year, General Spaatz wrote General Fairchild, recommending "a prominent place in the curricula of our AAF Schools for specific courses and general instruction in the fundamentals of good usage in speaking and writing English." He elaborated on his concern about the communications skills of officers:

> I am certain that your experience, like my own, must have impressed you with the very serious shortcomings of many of our officers in intelligible self-expression, both oral and written. While ability to think clearly, logically, and soundly needs no defense or selling in taking its proper place, the incalculable value of its essential corollary, ready ability to express oneself, is unfortunately not so generally appreciated.[38]

Similarly, some of the correspondence of AU's first leaders sheds light on the nature of the school's charter. In a letter of 13 February 1946 to Maj Gen Orvil A. Anderson, first commandant of Air War College, General Fairchild wrote,

> I have given considerable thought to the organization and method of instruction in this institution. I am convinced that it should be run on the model of the old Army War College, that is, by the seminar or committee method of instruction. I believe this method of instruction is peculiarly adapted to the high level of subject matter which this institution will be

> concerned with. You will be dealing with problems and questions on which we are hardly prepared to deliver dogmatic instruction, since the answers to many of the problems are not too clearly evident as yet. The level of instruction in the Air War College should be such that our most senior officers could profitably take the course. I am sure that we cannot get together any body of instructors who could instruct these people by the dogmatic lecture method, and that they must work out the answers to the problems presented to them more or less on their own.[39]

Further, General Fairchild's letter of welcome to the first class of incoming student officers pointed out that

> our mission calls for the discarding of traditionalism and rigidity of thought and doctrine. Our whole thinking must be fresh, original, and oriented on the future. The dividing line here between teaching and learning will be nebulous indeed. The maximum contribution of every one of us is demanded, to the end that the Air University may produce a corps of officers and establish a system of concepts and doctrine adequate to the needs of the Army Air Forces in fulfilling its obligations to our nation.[40]

General Fairchild reiterated these points in his welcoming remarks to AU's first students by reminding them that "this is not a post-war school system—it is a pre-war school system!" He went on to describe the educational requirements of the officer "who would seek to plan for and direct the activities of the global Air Force of the future":

> Not only must he be thoroughly trained and grounded in the factual knowledge and technical skills of his profession; he must be so truly educated as to develop the ability to deal with problems, the solution of which involves thinking that goes beyond the manipulation of learned techniques or the use of prior formulations or practice.
>
> Thus the Air University will seek most earnestly to develop in students the power to solve problems by well ordered, resourceful and original thought, rather than merely to train them in information and the routine performance of techniques.[41]

Also speaking on this occasion, General Schlatter outlined "certain basic doctrines to guide the various schools and colleges and the academic staff." Specifically, he mentioned that

> we must guard against traditionalism and rigidity of thought. . . . Since Air Power is global, thinking must be on a global scale. . . . It is proposed to educate officers to develop fundamental powers of thought, meanwhile providing them with the tools of their profession. . . . Courses will be designed to guide future thought in the Air Forces. All officers must acquire skill in the facility of oral and written self-expression. . . . We conceive it to be the high and noble goal of the Air University to educate and to aid in producing the planners and future leaders of the USAF.[42]

No single document combined all of these ideas into a formal statement designed to guide AU in the implementation of Air Force PME. Based on the evidence cited above, one might conjecture that such a document would have directed AU to educate Air Force officers to (1) think, (2) lead, (3) systematically solve problems, (4) plan and prepare for future events, (5) express themselves clearly, and (6) develop resourcefulness, initiative, and judgment.

Changes in Air University Regulations

The original regulation directing the establishment of AU was AAFR 20-61, *Organization, AAF School*, first published on 4 January 1946. Over the next 40 years, the regulation was changed or renumbered more than two dozen times, with the latest version following AU's return to major command status in 1983 (AFR 23-52, *Organization and Mission-Field, Air University*, 23 May 1985). In all, 23 documents have directed AU's mission.[43] These regulatory changes, however, have had relatively little effect on AU's PME charter, although some have attempted to clarify the purpose of PME at Air University.

For example, the 8 May 1950 revision of AFR 23-3, *Organization—Air Command and Air Forces, Air University*, indicated that "the mission of the Air University is to provide professional military education to prepare officers for command of large Air Force units, wings, groups, and squadrons, and for staff duties appropriate to those command positions."[44] Thus, this version of the regulation was the first to provide an explicit statement of what PME was supposed to accomplish. Similarly,

the version of 13 June 1963 added the objective of preparing officers for service in joint and combined commands.[45] Last, the current regulation, AFR 23-52, further clarifies the nature of PME by defining it as "education which provides theoretical and applied knowledge of the profession of arms" and differentiating it from graduate education and professional continuing education.[46]

Defining Air University's Goals for Professional Military Education

The most important, yet most difficult, step in developing any educational system is establishing goals for that system. As the saying goes, "If you don't know where you are going, how will you know when you have arrived?" From the beginning, the Air Force system of PME should have been designed to imbue Air Force officers with specific, well-defined traits.

The report of the Air Force Educational Requirements Board Task Group noted on 10 July 1963 that Air Force PME lacked this type of forward-looking perspective. Although AU's leaders took issue with some of AFERB's recommendations, they agreed that AU should have "a comprehensive description of the professional Air Force officer and a definition and a philosophy of PME."[47] Thus, they endorsed AFERB's description of the Air Force officer, as well as its definition and objectives for PME.

The Air Force implemented the task group's recommendations by publishing AFM 53-1, *United States Air Force Officer Professional Military Education System*, on 5 May 1966. This was an important document and is worth quoting at length. First, the manual's foreword addressed the very areas with which AFERB was concerned:

> This manual provides the basic reference authority and description of the responsibilities for the Professional Military Education (PME) system for USAF commissioned officers. It describes the professional Air Force officer, defines Professional Military Education, states the Air Force philosophy of military education, outlines PME objectives, describes the

basic elements of the system, establishes related responsibilities, and establishes selection criteria.[48]

Noting that "the keynotes of the military professional are: dedication to national security, organizational identity and esprit de corps, ethical behavior, and skill and knowledge,"[49] the manual then described the type of officer who would meet these standards:

> The professional Air Force officer is the aerospace expert of the nation's fighting forces. He understands the nature of war and is proficient in the art of waging it under any level of conflict. He is a leader of men in both peace and war, and he is accomplished in utilizing his knowledge and skills in organizing and managing resources.
>
> He combines military bearing and self-confidence with loyalty, integrity, self-discipline, versatility and adaptability. His ethics and conduct are based upon the idea of service above self.
>
> He communicates effectively and works efficiently with people at all levels from all walks of life. He participates in specialized education as well as specialized training, and he uses the knowledge gained in conjunction with professional military education, in order to assume greater responsibilities as he progresses in his military career.
>
> The professional Air Force officer recognizes that he must continually expand his knowledge and understanding of the art of war. He recognizes his responsibilities to the Nation, both as a citizen and a military officer. He thus seeks to maintain those high intellectual, ethical and physical standards requisite to a corps of professional officers which merits the trust and respect of the society which it serves. The professional officer never forgets that in a democratic society his role is always that of a subordinate to legally constituted political authority.[50]

Having described the goal of PME in terms of its finished product—the Air Force officer—AFM 53-1 then identified the attributes of PME:

> Professional military education is the systematic acquisition of theoretical and applied knowledge which is of particular significance to the profession of arms. It involves the acquisition of knowledge, skills and attitudes which are requisite to military professionalism, and which form the core of understanding which must be common to all officers, regardless of service or of the specialized activities in which they are engaged.

> Professional military education is primarily the study of officership, of the responsibilities attendant upon public stewardship, and of the military arts and sciences of command staff expertise in both peace and war. It is directed toward the officers' thorough understanding of national goals and objectives, and the ways and means of utilizing military force to achieve them.[51]

The manual also delved into a more expansive philosophy of military education that underlay Air Force PME:

> The Air Force must maintain a corps of officers whose dedication to the nation's defense places country, duty, and honor above self, whose knowledge of war and the military arts and sciences is sought and acquired to upholding the national purpose and the nation's goals, and whose expert and spirited leadership will instill the virtues of fidelity, loyalty, bravery and sacrifice in its followers. Responsibility for the development of a corps of officers with these characteristics must be shared by Air University.
>
> Professional military education is concerned with military professionalism for all officers, whatever their specialties, their grades, or the duration of their commitment to the Air Force. . . . Specialized knowledge can be acquired from many sources, including civilian institutions, whereas military education is the unique responsibility of the military establishment.
>
> Each level of professional military education should provide the opportunity for students to gain the knowledge, understanding, attitudes, and skills needed for performance of duty in the next several years after graduation. Certain fundamentals are applicable to an entire career.
>
> Professional military education should be conducted in an atmosphere of academic freedom . . . of individual inquiry, of critical thinking, and of research relevant to the nation's military affairs. It should concern itself with principles, concepts, ideas, and with applications. Students should be intellectually challenged to the utmost of their abilities.[52]

This philosophy was to be implemented by a number of objectives designed "to enhance the professional military competence of Air Force officers."[53] Thus, the Air Force should

> provide educational programs which will increase the officer's ability to think creatively, to solve military problems in a logical and systematic manner, to apply the techniques of individual research, to prepare military

> studies and plans, and to make clear and meaningful oral and written presentations.
>
> [Further, the Air Force should] provide an educational environment which will foster the officer's personal dedication to national goals and national defense, stimulate development of leadership attributes and the determination to use them continuously and expertly, and encourage the establishment and pursuit of goals for self-improvement.[54]

Last, on a more concrete level, AFM 53-1 identified the subjects to be taught at Air Force PME schools:

> The nature of war, its causes, its tactics and strategies; and how military forces, particularly aerospace forces, are developed, sustained, and employed throughout the entire spectrum of uses of military power. . . . The political, economic, technological, and psychological factors which influence our national security and international relations. . . . The fundamental principles and concepts of leadership and management. . . . The organization, mission, and doctrine of the US armed forces, particularly aerospace forces; and how they are employed, including joint and combined operations. . . . The doctrine, strategies, tactics, organizations, capabilities, and limitations of the armed forces of allied and potential enemy nations. . . . National and international security organizations.[55]

The manual was a major milestone in thinking about Air Force PME, but within a decade much of the intellectual impetus had been lost. In 1976 AFM 53-1 became AFR 53-8, incorporating several significant changes. Specifically, the new document deleted the description of an Air Force officer; shortened the definition of PME ("the systematic acquisition of theoretical and applied knowledge of the profession of arms");[56] emphasized that aerospace power is an integral part of the philosophy of Air Force PME ("The prime purpose of Air Force professional military education is to develop experts in aerospace power, which makes Air University PME schools unique among professional institutions"); and, rather surprisingly, deleted the manual's statement that "students should be intellectually challenged and motivated to the utmost of their abilities."[57] The latest revision to the regulation (24 October 1986) makes no significant changes to the 1976 version.

Presently, AFR 53-8 and AFR 23-52, *Organization and Mission-Field, Air University*, direct the philosophy and mission, respectively, of Air Force PME. Yet the content of these regulations is little different from the original informal guidance. AU is still simply tasked to teach officers to (1) think creatively, (2) lead effectively, (3) solve military problems, (4) prepare military plans and studies, (5) express themselves clearly, (6) develop qualities of loyalty, integrity, courage, and sacrifice, and (7) uphold national purposes and goals. The schools at AU implement the task with curricula designed to increase understanding of war (its causes, doctrine, strategies, and tactics), military forces (their development, sustainment, and employment), national security (organization and decision-making processes), and international relations.

School Curricula and Mission Statements

Like the definition, goals, and purpose of PME, the curriculum and mission of AU's schools—Air War College, Air Command and Staff College, and Squadron Officer School—underwent distinct changes.[58] Indeed, an examination of each school's curriculum and mission statement reveals that changes in the former were directly related to changes in the latter. Furthermore, alterations in mission statements were driven by both internal factors (e.g., new theories of professional education) and external factors (e.g., world events). In fact, these changes are distinct enough to justify a division of each school's curriculum development into stages (see tables 1–3). Certainly, the evolutionary nature of the PME curriculum is a logical subject for inquiry because the Air Force invests a great deal of time and effort and commits substantial resources to reviewing curricula and making appropriate changes. However, some questions remain as to whether AU is changing the right subject areas and whether such change is advancing the mission of its schools.[59]

Air War College

Of AU's three schools, the Air War College—the Air Force's premier school for senior officers—has received the lion's share of attention (both good and bad) concerning the way the Air Force conducts its PME programs. Over time, AWC's mission statements have changed, each version reflecting varying degrees of educational maturation and the influence of external events (table 1). The college's first classes were small (55 students in 1946, 160 in 1952), and the faculty educated the students in broad aspects of air power and prepared them to command and employ large Air Force units.[60] Gradually, emphasis shifted to preparing these officers for high command and staff duty; consequently, by the mid-1960s military strategy and national security policy became prominent elements of the curriculum.[61] Of course, aerospace power remained a consistent theme throughout. The latest AWC mission statements complement current Air Force policy that promotes war-fighting and war-winning capabilities by seeking to prepare leaders to "develop, maintain and lead the aerospace component . . . to deter conflict and achieve victory in the event of war."[62]

TABLE 1

Evolution of Air War College Curricula

Stage	*Mission Statement*	*Curriculum Years*	*Phase*
1	1946 Version	1946–52	Initial
2	Rewritten 1947 Statement	1952–60	Evolving Cold War
3	1959 Version	1960–64	Heightened Cold War
4	1965 Version	1964–71	Southeast Asia Conflict
5	1965 Version Retained	1971–76	Post-Southeast Asia Period
6	1976 Version	1976–78	Transition Period
7	1978 Version	1978–86	Management Approach
8	1986 Version	1986–88	War-Fighting Approach

Both instructional methods and curriculum have changed since AWC opened over 40 years ago. Faculty used the problem-solving method of instruction (similar to the case-study method) in early classes, but, as the course of study expanded to 1,600 hours, instructors encouraged student research and presented international and strategic issues from a broader perspective.[63] By the early sixties, the curriculum was split between international relations (33 percent), national security policy (35 percent), and military and national strategy (30 percent). The advent, in 1961, of a program that allowed AWC students to earn a master's degree from George Washington University curtailed AWC's own program of independent student research for a while. This reduction did not reflect a loss of enthusiasm for research at AWC; students simply had less time to conduct it. Furthermore, a flying program of 170 hours occupied over 10 percent of the total curriculum for rated students.[64]

The growing conflict in Southeast Asia drastically reduced the number of students attending AU in residence. Attendance at AWC dropped from 285 per year in the mid sixties to fewer than 150 by the late sixties. Of the latter number, only 66 were Air Force officers (during the same period, ACSC went from 600 to 300 students, and SOS dropped from 830 to 380 students per class).[65] This reduction in personnel presumably had an adverse effect on faculty and staff as well. AU programs did not return to normal operating levels until the early 1970s. From the standpoint of curriculum changes, AWC placed greater emphasis on defense resource management and leadership, began offering elective courses and a Professional Studies Program (PSP), and required more independent study and research (termination of the time-consuming flying program in 1971 made this change possible).[66]

As AWC emerged from the turmoil of SEA in the 1970s, the school made an effort to reshape and redefine its approach to advanced academics. For instance, the curriculum of the mid-1970s contained four evenly balanced areas that, in combination, constituted almost half the program of study. These were leadership and management (10 percent), national security

affairs (10 percent), military strategy and capabilities (10 percent), and military capabilities and employment (14 percent). By far the largest block of the curriculum was independent study (40 percent), while electives and military studies (the successor to the PSP) filled out the remainder.[67] Thus, AWC was particularly attractive to serious students looking for the opportunity and time to do some in-depth research.

By the early 1980s, emphasis on independent study and research had lessened a bit (to 30 percent), as the curriculum reflected a growing interest in joint and combined warfare, doctrine and strategy, and future issues such as space.[68] These changes were the product of a conscious effort by AWC faculty and staff to keep the curriculum current and meaningful. Whether these latest changes are truly challenging and beneficial for the students remains to be seen, but the curriculum—on paper at least—appears solid.[69]

Air Command and Staff College

From its inception, Air Command and Staff College has prepared selected intermediate-level career officers for duty on various staffs. However, ACSC's purpose has not always been clear—even to AU leaders. For example, in a letter of 17 November 1976 to General Tallman (Air Force deputy chief of staff for personnel), Lt Gen Raymond B. Furlong (AU commander) said he had finally decided that

> the primary role of the command and staff graduate is that of the facilitator. Whereas the war college graduate is educated primarily as an executive decision maker and the squadron officer course aims at the operator, the facilitator is the staff officer, mid-level manager, or operational unit commander. Using this focus, we build a 10-month curriculum to develop (1) common staff skills, (2) specific managerial and leadership skills, and (3) functional specialist skills related to broad career areas. To complement these specific areas, we added essential professional information on the Air Force, the defense establishment, and the nation.[70]

Further, in a memorandum of 17 October 1984 to Verne Orr (secretary of the Air Force), J. Michael Kelly (deputy assistant secretary of the Air Force) stated that ACSC "appears to be neither a short motivational course [like SOS] nor a deep immersion [like AWC]." The length of time spent at ACSC, as well as the makeup of its curriculum and student body, is a function of the school's purpose. If the school exists to educate students in the "fundamentals of command and staff work," Kelly urged that the course be shortened to five months and that the students enter with about seven, rather than nine, years of prior service. These changes would not require revisions in the curriculum if students were required to complete the ACSC correspondence course before beginning the residence course. However, Kelly continued,

> if the purpose of ACSC is to provide an in-depth study of essential subjects to a hand-picked elite, this purpose would be better served by rolling ACSC into the AWC. This would provide for a two year assignment to Air University, vice two one year assignments, with a resultant savings in PCS costs [and] disruption of members' lives.[71]

Some critics have argued that the ACSC curriculum is too much like AWC's. Others, however, point out that this similarity is acceptable because the schools have different emphases. Besides, for many students, ACSC will be their final PME program in residence. Moreover, the perspectives and interests of officers at the senior service school should be considerably different from those of field grade officers at the intermediate service school.

Such concerns are only partially reflected in the evolution of the ACSC mission over the past four decades (table 2). Early mission statements indicate that the school was interested primarily in preparing its students for command and tasks associated with "wings and higher units."[72] By the mid-1950s, the 10-month school had grown to its present enrollment of 600 students, had expanded its mission, and sought to improve its students' "abilities to execute the command and staff tasks required to implement air strategy and Air Force missions; and to contribute to the development of air doctrine, strategy and tactics."[73]

For the next quarter century, ACSC followed a regular pattern of issuing revised mission statements and adjusting curricula accordingly. These mission statements were consistent in their recommendation that students spend a considerable amount of time doing independent study and research. In the late 1970s, such statements declared that ACSC students would "enhance their value to the Air Force . . . conduct student and faculty research of value [and] make available significant products of this research."[74] Consequently, ACSC students oftentimes carried heavier academic work loads than did AWC students.

TABLE 2

Evolution of Air Command and Staff College Curricula

Stage	*Mission Statement*	*Curriculum Years*	*Phase*
1	1946 Version	1946–50	Initial
2	1949 Version (Five-Month Field Officers Course)	1950–54	Specialized
3	1956 Version	1954–63	Evolving Cold War
4	1962 Version	1963–69	Early Southeast Asia Conflict
5	1969 Version	1969–75	Late Southeast Asia Conflict
6	1975 Version	1975–77	Transition Period
7	1978 Version	1977–80	Management Approach
8	1981 Version	1980–88	Professional Leadership

The evolution of curricula that accompanied these changes in mission statements has been a smooth process. After a major curriculum reorganization in the early 1960s, three general subject areas emerged for the academic portion of the program: military employment (44 percent), military management (40 percent), and international conflict (including national security problems and

strategy, 16 percent).[75] The military management area included thesis work, which occupied a nominal 11 percent of the curriculum. (Actually, the requirement for completing a thesis and independent study took much more time but curiously was subsumed under areas labeled "other than academic.")

During the period of reduced enrollment occasioned by the Vietnam War in the late 1960s, ACSC's objectives were to instill "professional competence and preparation and growth" in the few students in residence. Although military environment (10 percent), management (15 percent), and employment (22 percent) took up almost half of the curriculum's 1,600 hours, independent work and related areas were growing in importance. For instance, in 1969 independent study (and flying), research preparation, and electives accounted for 26 percent, 12 percent, and 4 percent, respectively, of the curriculum.[76]

As the United States withdrew from the Southeast Asia conflict in the mid-1970s, the ACSC curriculum moved into the areas of leadership and management, emphasizing four general subject areas: communication and research (7 percent), command and management (18 percent), aerospace policy and planning factors (5 percent), and military employment (17 percent). The remaining areas were independent study, electives, and a new subphase called commandant's options.[77]

During the eighties, ACSC—like AWC and SOS—altered its curriculum to produce professional leaders knowledgeable in the areas of war fighting and joint operations. Thus, the curriculum emphasized warfare studies, including force employment, strategy, and doctrine phases as well as command, leadership, and resource management.[78]

Evidently, all of the changes to ACSC's mission and curriculum have not had an adverse effect on the school's ability to fulfill its role as the Air Force's intermediate professional school for officers. Rather, the adaptability of ACSC's mission and course of study has allowed Air Force officers to benefit from contemporary theories of education and prepare themselves for service in a constantly changing environment.

Squadron Officer School

Because of the clarity of Squadron Officer School's stated purpose, the school's mission statements and curricula have varied little over the years (table 3). General Ralph, onetime commandant of SOS, described the school in terms of its importance to young officers:

> The basic thrust of the curriculum and spirit of the school is toward *a socialization process* [emphasis added]. We want the junior officer to see and understand his military role so that he can either reject it at this early point in time, or relate to it and use it as a basis for professional development throughout the rest of his career.[79]

In his 1984 memorandum to the secretary of the Air Force, J. Michael Kelly agreed with General Ralph's assessment: "We view SOS as a broadener/motivator from which most company grade officers could and should benefit, and we try to send as many officers to it as we possibly can."[80]

TABLE 3

Evolution of Squadron Officer School Curricula

Stage	*Mission Statement*	*Course Length*	*Curriculum Years*	*Phase*
1	1951 Version	8 Weeks	1950–52	Initial Squadron Officer Course (SOC)
2	1953 Version	10 Weeks	1952–59	Expanding SOC
3	1962 Version	14 Weeks	1959–65	Independent SOS
4	1965 Version	14 Weeks	1965–71	Southeast Asia Conflict
5	1971 Version	14 Weeks	1971–73	Post-Southeast Asia Period
6	Similar to 1971 Version	11 Weeks	1973–80	Professional Growth
7	1980 Version	8+ Weeks	1980–88	Support of Combat Operations

Throughout the history of SOS, only two significant changes were made to its mission statements. Enhancing professional development and growth became part of the mission statement in the early 1970s.[81] More recently, in keeping with the emphasis on developing war-fighting skills that began in the early 1980s, SOS sought to have its students "better perform and value their roles in conduct and support of combat operations and other USAF missions."[82]

Despite changes in the length of the course of study at SOS over the years (variously eight, nine, 10, 14, eight and one-half, and now seven weeks), the substance of the school's curriculum remained stable.[83] Once the SOS faculty and staff decided upon a basic curriculum, the school stayed with it. For years, SOS covered five general areas: (1) communicative skills (speaking and writing according to Air Force style), (2) Air Force leadership, (3) national power and international relations, (4) management, and (5) forces and employment. The curriculum also accommodated field activities (e.g., team sports and Project X, a leadership testing laboratory) as well as independent study and research. SOS later reduced the number of general areas to four but covered the same subject matter.[84]

The proportion of the curriculum occupied by these areas has changed over time, however. Air Force leadership grew from 18 percent to 40 percent, as of 1987. Communicative skills have averaged about 18 percent and forces and employment slightly less. Officership (formerly command-staff team or management) has comprised about 9 to 10 percent of the curriculum. Independent study and research have lost ground, slipping from 22 percent in the early 1960s to 1 percent at present. Despite the latter trend, SOS appears to be maintaining a full, beneficial program.[85]

Thus, the Air Force has continually reevaluated and refined its purpose for providing officers with professional military education. Charged with implementing a system of PME, Air University is also subjected to considerable scrutiny by parties who seek to determine whether AU is fulfilling its mandate. This type of criticism, addressed in the next chapter, is both inevitable and

essential if AU is to produce the types of leaders whom the Air Force needs and the nation deserves.

Notes

1. *First Report of the Board of Visitors* (Maxwell Field, Ala.: Air University, Spring 1946), 22–23 (hereafter, BOV 1); BOV 3 (January 1948): 33–34. General Schlatter also stated that AU "proposed to educate officers to develop fundamental powers of thought, meanwhile providing them with the tools of their professions." *Proceedings of the Educational Advisory Staff Conference, July 11–12, 1947* (Maxwell Field, Ala.: Air University, 1947), 12–13.

2. BOV 1 (1946): 53.

3. *A Report to the Commanding General, Air University, of an Educational Survey at the Air Command and Staff School* (Maxwell AFB, Ala.: Air University Human Resources Research Institute, 1 September 1949), 15; *Report of the USAF Educational Requirements Conference* (Maxwell AFB, Ala.: Air University, 8 November 1956), 65; and Dr R. Gordon Hoxie, "Observations on the Education Programs of the United States Air Force," Paper for Air Force chief of staff, 2 July 1964, 2. The Hoxie study is informal and unpublished. It is available in the documents section of the Air University Library, Maxwell AFB, Ala., call no. M-43106-U. Hoxie performed his study as a mobilization assignee working for the Air Force chief of staff. He later added, "It is axiomatic and a basic truth that the very future of a military force is dependent upon its professional education; for a young force it is vital" (page 8).

4. BOV 19 (1963): 5. By this time SOS, ACSC, and AWC were all located at Maxwell AFB, Alabama.

5. BOV 2 (1947): 4–6; see also note 37.

6. Ibid., 51, 54, 65.

7. BOV 12 (1956): 3.

8. Frederick H. Hartmann, "The War Colleges in Perspective," in *The System for Educating Military Officers in the U.S.*, ed. Lawrence J. Korb, International Studies Occasional Paper no. 9 (Pittsburgh, Pa.: International Studies Association, 1976), 132.

9. *Air University Objective Plan* (Maxwell AFB, Ala.: Air University, 15 May 1967), 3–6.

10. Memorandum for record, Col Bondy H. Holcombe, assistant deputy chief of staff for education, Air University, subject: AU/CC's Concern Regarding 16–17 December 1974 Minutes of the AFERB, 19 March 1975.

11. Lt Gen F. Michael Rogers, "Why Professional Military Education?" *Air University Review* 26, no. 5 (July–August 1975): 6–7.

12. USAF Deputy Chief of Staff for Personnel, *Report of a Study on Officer PME Policy* (Washington, D.C.: Government Printing Office, March 1976), 7–8.

13. Ibid., 17–18.

14. DOD Committee on Excellence in Education, *The Senior Service Colleges: Conclusions and Initiatives* (Washington, D.C.: Government Printing Office, 5 June 1975), 2.

15. Ibid., 3–6.

16. Ibid., 5.

17. Maj Gen I. B. Holley, Jr., USAFR, Retired, to Lt Gen Thomas C. Richards, AU commander, letter, subject: Suggestions for Strengthening the Air War College Course, 5 September 1984, 1–2.

18. Lt Gen William R. Richardson, "Officer Training and Education," *Military Review*, October 1984, 26–28, 33.

19. Lt Gen Kenneth L. Tallman, deputy chief of staff for personnel, US Air Force, to Gen David C. Jones, chief of staff, US Air Force, letter, subject: ACSC Curriculum Length, 2 December 1976, 3.

20. Maj Gen C. G. Cleveland, director of personnel programs, US Air Force, Staff Summary Sheet, Alternative Officer PME Programs, 22 October 1977.

21. Memorandum, Vice Adm Patrick J. Hannifin, director, Joint Staff, to the secretary of defense [Harold Brown], subject: Professional Development Education, 3 April 1978, 2.

22. Ibid., appendix B, 16.

23. *Officer PME Study* (Maxwell AFB, Ala.: Air University, February 1980), 30.

24. *Report of a Study on Officer PME Policy*, 17.

25. Brig Gen John E. Ralph, "Professional Identity in a Plural World: The Focus of Junior Officer Education in the United States Air Force," in Korb, 96–97, 100.

26. This section examines the scope and subsequent modifications to the charter that tasked AU to conduct PME. Because our primary sources—tasking documents—provided little information about the Air Force's plans for PME, we also consulted letters, speeches, and articles to obtain a more complete picture of AU's system of officer education.

27. AFR 53-8, *USAF Officer Professional Military Education System*, 24 October 1986, 6.

28. Adjutant general to commanding generals, Army Air Forces; Army Air Forces Center; Army Air Forces Training Command; commandant, Army Air Forces School, letter, subject: Assignment and Establishment of Army Air Forces Schools, 19 November 1945.

29. AAFR 20-61, *Organization, AAF School*, 4 January 1946, 1.

30. General Order no. 11, *Redesignation of the Army Air Forces School and Establishment of Certain Other Army Air Forces Schools and Activities*, 15 March 1946, 1.

31. AAFR 20-61, *Organization, Air University*, 5 April 1946, 1, para. 2.a. The regulation also listed the AAF School of Aviation Medicine and "such other schools, installations, and courses as may be assigned to the Air University." Additionally, it made AU responsible for the AAF Institute of Technology (later the Air Force Institute of Technology at Wright-Patterson AFB, Ohio) and gave the school authority to recommend that AAF officers take courses not under the control of AAF (para. 2.b. and 2.c.). Further, a revision dated 3 June 1946 made AU responsible for the AAF Special Staff School as well as for training AAF officers to be instructors at non-AAF schools, reviewing and preparing publications on AAF basic doctrine, evaluating tactics, and making recommendations to the AAF commanding general on various topics (page 1).

32. AAFR 20-61, 5 April 1946, para. 2.d.

33. AAFR 20-61, 3 June 1946, 1.

34. Memorandum, Maj Gen Donald Wilson, commander, AAF Proving Ground Command, to the president, AAF Board, subject: Army Air Forces Postwar School System, 9 August 1945. The AAF Board was formed during World War II and assigned to develop tactics, techniques, doctrine, and military requirements for the Army Air Forces. See Robert F. Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907–1960*, vol. 1 (Maxwell AFB, Ala.: Air University Press, December 1989), 138–42.

35. Memorandum, Maj Gen C. C. Chauncey, deputy chief, Air Staff, to Maj Gen David Schlatter, acting commandant, AAF School, subject: Directive Regarding Army Air Forces School, 8 November 1945.

36. Memorandum, Lt Gen Ira C. Eaker, deputy commander, Army Air Forces, to Maj Gen Muir S. Fairchild, commandant, Army Air Forces School, 20 December 1945.

37. Gen Carl A. Spaatz, commanding general, Army Air Forces, to Dr Clarence A. Dykstra, provost, University of California, letter, subject: Participation on the AU Board of Visitors, 27 March 1946 (same letter sent to 12 other university administrators).

38. Gen Carl A. Spaatz, commanding general, Army Air Forces, to Maj Gen Muir S. Fairchild, commanding general, Air University, letter, subject: Individual Self-Expression, 3 June 1946; 1st ind., Maj Gen Muir S. Fairchild, commanding general, Air University, to commanding general, Army Air Forces, 3 June 1946.

39. Maj Gen Muir S. Fairchild, commandant, Army Air Forces School, to Maj Gen Orvil A. Anderson, commandant, Air War College, letter, subject: Air University Faculty, 13 February 1946.

40. Maj Gen Muir S. Fairchild, commanding general, Air University, to incoming officers, letter, n.d.

41. George N. Dubina, *Dedication and Significant Events, 1946–1971*, Air University Historical Division Study Series, no. 36 (Maxwell AFB, Ala.: Air University, December 1971), 36–37.

42. Maj Gen David M. Schlatter, deputy commanding general for education, Air University, welcoming address to the initial classes of the Air War College and Air Command and Staff School, Maxwell Field, Ala., 3 September 1946.

43. These include AAFR 20-61, *Organization, Air University*, 5 April 1946; AAFR 20-61, *Organization, Air University*, 3 June 1946; AAFR 20–61, 10 October 1946; AAFR 20-61A (Supplement), 19 December 1947; AFR 23–3, *Organization—Air Commands and Air Forces, Air University*, 4 April 1949; AFR 23-3A, 13 May 1949; AFR 23-3, 8 May 1950; AFR 23-3, 3 August 1951; AFR 23-3A, 3 April 1952; AFR 23-3B, 3 December 1952; AFR 23-3, *Organization-Field, Air University*, 19 October 1954; AFR 23-3, 1 July 1959; AFR 23-3, 31 August 1960; AFR 23-3, 9 March 1961; AFR 23-3, *Organization and Mission-Field, Air University*, 13 June 1963; AFR 23-3, 3 March 1966; AFR 23-3, 18 July 1968, and change 1, 20 December 1968; AFR 23-3, 1 May 1973; AFR 23-3, 29 April 1974; AFR 23-3, 30 November 1977; AFR 23-6, *Organization and Mission-Field, Air Training Command*, 20 June 1979; and AFR 23-52, *Organization and Mission-Field, Air University*, 23 May 1985.

44. AFR 23-3, 8 May 1950, 1.

45. AFR 23-3, 13 June 1963, 1, para. 1.b.

46. AFR 23-52, 1, para. 1.a.

47. Lt Gen Troup Miller, Jr., commander, Air University, to Headquarters USAF/AFPDP, letter, subject: Report of the Educational Requirements Board on Professional Military Education, 30 August 1963, atch, 1. Attachment is entitled "Air University Position [on] Report of the Educational Requirements Board on Professional Military Education."

48. AFM 53-1, *United States Air Force Officer Professional Military Education System*, 5 May 1966, i.

49. Ibid., 1, para. 1-2.d.

50. Ibid., 2, para. 1-4.a. through d.

51. Ibid., 3, para. 2-2.

52. Ibid., 4, para. 2-3.

53. Ibid., 5, para. 2-4.

54. Ibid., 5, para. 2-4.e. and f.

55. Ibid., 5, para. 2-4.g. through l.

56. AFR 53-8, 19 April 1976, 2-1, para. 2-1.

57. Ibid., para. 2-2.a., 2-3.a.

58. Robert W. Schmidt, *Air University History, Twenty-Fifth (Silver) Anniversary Command Edition—History of the Air War College 1946–1971* (Maxwell AFB, Ala.: Air University, 1 February 1971), 33; Capt Michael F. Burke, *Air University History, Twenty-Fifth (Silver) Anniversary Command Edition—History of the Air Command and Staff College 1946–1971* (Maxwell AFB, Ala.: Air University, 1 February 1971), 34–36.

59. Schmidt, 33; Burke, 34–36. Information about these changes came from sources such as each school's annual curriculum and annual mission statement—usually in the school's catalog. These documents were published

from 1946–1948 and from the mid-1960s to the present. Information about the intervening years came from school histories and special reports on the schools' 20th and 25th anniversaries. In addition to identifying trends, patterns, or anomalies, these sources also indicate how emphasis on different subject areas changed during various stages of curriculum development. Note that all such catalogs and manuals are produced at Air University, Maxwell AFB, Alabama.

60. *Air University Catalog 1946–1947* (Maxwell AFB, Ala.: Air University, 1946), 52 (hereafter, *AU Catalog*, academic year specified); *AWC Curriculum Summary 1952–53* (Maxwell AFB, Ala.: Air War College, 1951), 1.

61. *AU Catalog 1965–1966*, 8.

62. *AU Catalog 1986–1987*, 11.

63. Schmidt, 12–15; *AU Catalog 1946–1947*, 53; *AU Catalog 1947–1948*, 34–36.

64. *War College Orientation and Curriculum Catalog 1961–1962* (Maxwell AFB, Ala.: Air War College, 1951), 7, 11.

65. *AU Catalog 1968–1969*, 7, 17, 27.

66. See *AU Catalog 1967–1968*, 10; *AU Catalog 1971–1972*, 10; *AU Catalog 1972–1973*, 10.

67. *AU Catalog 1977–1978*, 7.

68. *AU Catalog 1982–1983*, 6.

69. *AU Catalog 1986–1987*, 25–26.

70. Lt Gen Raymond B. Furlong, commander, Air University, to Lt Gen Kenneth L. Tallman, deputy chief of staff for personnel, US Air Force, letter, 17 November 1976.

71. Memorandum, J. Michael Kelly, deputy assistant secretary of the Air Force for manpower, resources, and military personnel, to the secretary of the Air Force [Verne Orr], subject: Officer Professional Military Education Course Length and Curriculum, 17 October 1984.

72. Burke, 6.

73. *CSC Curriculum Class 1953* (Maxwell AFB, Ala.: Command and Staff Course, 1952), iii–iv.

74. *AU Catalog 1979–1980*, 14.

75. Burke, 42–43.

76. *AU Catalog 1969–1970*, 19–21.

77. *AU Catalog 1975–1976*, 19–22.

78. *AU Catalog 1986–1987*, 42.

79. Ralph, 101.

80. Quoted in Kelly memorandum, 1–2.

81. *AU Catalog 1970–1971*, 34.

82. *AU Catalog 1980–1981*, 21.

83. *AU Catalog 1965–1966*, 43; *AU Catalog 1973–1974*, 37; *AU Catalog 1980–1981*, 21.

84. *AU Catalog 1965–1966*, 45; Col Russell V. Ritchey, *Years of the Tiger*, ed. Maj Rolland F. Clarkson, Maj Joel W. Sills, and Capt Martin J. Costellic

(Maxwell AFB, Ala.: Squadron Officer School, June 1974), 42–44, 67–68; *AU Catalog 1975–1976*, 40.

85. *SOS Curriculum, Class 1962* (Maxwell AFB, Ala.: Squadron Officer School, 1961), 1–2, 9; *AU Catalog 1980–1981*, 23; *AU Catalog 1971–1972*, 34.

Chapter 3

Commentary on Air University, 1946–87

Since 1946 various interested parties have evaluated the professional military education programs of Air University. These groups include the AU Board of Visitors, Air Force educational conferences, Air Force ad hoc committees, and miscellaneous groups outside the Air Force. Specifically, they have assessed AU's faculty, curricula, research, teaching methods, student selection procedures, and budget support. Although study groups have commented on some of these areas across the entire history of AU, their remarks on other topics—such as budget support—were restricted to only short periods of AU history. For convenience, then, this chapter divides the commentary on AU into two periods: 1946–67 and 1968–87.

Commentary, 1946–67

During AU's formative years, reviewers directed their attention toward fundamental matters that would affect the university's ability to fulfill its mission. They were particularly interested in the people—the faculty—who would instruct the select group of officers in attendance. Also at issue, however, were questions of curriculum, educational and teaching philosophy, the role of research, graduate qualifications, and funding.

Faculty

The first leaders of Air University realized that the quality of the Air Force's future leaders depended on the nature of the education they received at Air University. Naturally, that

education was a function of the faculty, whose effectiveness and expertise were influenced by factors such as their academic background and their length of tour at Air University. The entire educational system, in turn, depended on the attitude and support of the Air Force's senior leadership.

Air University's success hinged on its finding and keeping good faculty and encouraging their professional development. For example, the BOV strongly recommended that AU recruit a permanent nucleus of thinkers who would "set a pattern of imaginative thought and constant questioning that will insure against stagnation."[1] Gen Muir S. Fairchild, writing in 1946 to Maj Gen Orvil A. Anderson, AWC's commandant, noted that AU needed relatively few instructors, but those few should be "pretty well rounded and experienced." Unfortunately, Fairchild continued, because "everybody else will want [these people] for almost any job, it is going to be like pulling teeth to get the sort of men you will want."[2]

Indeed, faculty recruitment and retention have been problematic since AU's inception. In particular, faculty members' length of tour has been the subject of considerable commentary. The initial plan called for rotating one-third of the faculty after a standard tour of three years.[3] Interestingly, the BOV thought that three years was too short, but AU had trouble retaining faculty even for this length of time.[4] In 1949, for example, the average tour length at the Air Tactical School was 15 months; at Air Command and Staff School it was two and one-half years. Three-year tours did not become routine at Air War College until 1952 and at ACSS until 1953.[5] By 1951 the BOV's comment on this problem had become predictable: "[The board] reiterated its usual recommendation that more stability and length of service of the faculty would be prerequisite to the success of Air University."[6]

AU made several attempts to rectify this matter. One proposed solution was the use of "plowbacks," graduates retained as instructors. The thinking was that, qualitatively, they represented the upper echelon of Air Force officers. Administratively, extending their tours was simpler than reassigning personnel from another station. AU hoped to ease its faculty acquisition problems

by filling at least one-third of the faculty slots with plowbacks.[7] One consequence of this action, however, was that the AU faculty began to lose touch with operational changes in the Air Force. In fact, plowbacks were the "chief problem" at Squadron Officer Course (SOC) in 1954.[8] Thus, in 1958 the board recommended that AU reduce the number of plowbacks on the faculty and assure that at least one-third were nonplowbacks.[9]

AU also tried selective manning but with mixed results.[10] Thus, the recruitment problem tended to compound itself: as AU continued to have difficulty in attracting good faculty members, an appointment to AU became less appealing. Indeed, by 1959 knowledge of poor promotions among the AWC and ACSC faculties was widespread.[11] Headquarters AU recognized the problem, urging that "the merits of highly effective and outstanding AU instructors be given greater attention by promotion boards."[12] Unfortunately, the attention of the corporate Air Force lay elsewhere.

In addition to recuitment, another area of concern was the academic standing of the faculty. Specifically, the BOV felt that "the basic danger of a military educational institution lies in the inevitable tendency to become doctrinaire" and that AU could avoid such stagnation by procuring faculty members who were well educated and receptive to multiple views.[13] As one report noted,

> Since prestige of the schools hinges primarily on the capabilities and reputations of their teachers, the faculties should be upgraded in every way to the maximum extent. The greatest need for upgrading lies in the area of academic accomplishment.[14]

The BOV felt that AWC should be the embodiment of this ideal and that its faculty should influence both AU and the Air Force generally.[15]

Nevertheless, in 1963 the BOV was still urging that the AU faculty's formal education be upgraded. Even less encouraging, a study conducted the following year noted that "the educational level of the faculty of both the Air Command and Staff College

and the Air War College has been until recent date below that of the student bodies."[16]

Curriculum, Educational Philosophy, and Teaching Methods

Despite the BOV's warning, AU's schools became increasingly doctrinaire and specialized.[17] No doubt the situation was exacerbated by the faculty's short tours as well as nebulous definitions of PME and of the Air Force officer, together with a lack of official guidance on the educational philosophy or objectives of PME, as previously discussed.[18] But AU was still obligated to provide its officers with a "broader grasp of military and national problems."[19]

Some of the early criticisms of AU reveal much about the situation there by stating what AU's curriculum and philosophy were *not*. For example, in 1949 the Orleans report called for explicit mission statements, as well as a functional curriculum, and recommended that evaluations "measure reasoning, evaluation, interpretation, ability to make decisions, and other higher mental processes. . . . The measurement of information as such [should] be taboo."[20]

Similarly, by 1956 the Rawlings board was complaining that officers came to AU inadequately prepared (few had even baccalaureate degrees) and that the AU schools failed to produce truly educated officers in sufficient numbers (the Air Force was short 1,800 AWC graduates).[21] "The distinguishing mark of a profession," Rawlings insisted, "is a system of education, rather than training, that it sets up to instruct its members in its principles, ideals, and broad understandings."[22]

A 1955 study conducted by Ralph W. Tyler under contract to the Officer Education Research Laboratory at Maxwell AFB, Alabama, anticipated this sentiment. Tyler noted that since the Air Force is indeed a profession, it relies on "the intelligent application of . . . general principles" and, therefore, cannot resort to

specialization in education. Rather, AU's curricula should develop an

> understanding of relevant general principles, skill in the application of these principles in the solution of new problems, an understanding of relevant ethical considerations, and the ability to use relevant ethical principles in making decisions.[23]

Tyler further noted that the Air Force needed a clear educational philosophy: "Education is an activity with a purpose.... To choose the most important goals from among all the possible ones, it is necessary to apply a clear and consistent philosophy of officer education in the Air Force."[24] Having no philosophy would affect everything from curricula and concepts of career development to officers' valuation of PME.

Finally, commentators addressed AU's teaching methods. The Orleans report favored simulations, noting that "the closer the learning situation approaches reality, the less the loss of the learning in applying it to a new situation."[25] The BOV, however, advocated the use of seminars, although problems with the number and quality of faculty diminished the effectiveness of this method of instruction.[26] The board tended to downplay the use of guest speakers, although it recognized the value of their off-the-record comments.[27] Further, because the board insisted that an atmosphere of academic freedom was essential for the free exchange of ideas and for nurturing the ability to think, it decried the practice of burdening students with trivial assignments that detracted from this environment.[28]

The BOV also reviewed AU's efforts to educate officers who were unable to attend AU in residence. Most BOVs supported the liberal use of extension courses for "all officers who seek advancement," recognizing that they were in line with the broad educational aims of Air University.[29] However, the board cautioned that correspondence courses were not a panacea because they could not duplicate the residence curriculum, especially in terms of depth of instruction. Furthermore, some correspondence courses were unreasonably long. For example, during the first 10

years of its existence, the AWC extension course was so involved that it took five years to complete. Not surprisingly, only 18 officers were able to finish it.[30]

Research

In the late 1940s, General Fairchild had high hopes for his schools, noting that

> [Air War College] is the one place in the Air Forces where people have time to think and where it is their sole job to think. Therefore, it seems to me that the progress of the Air War College will not only permeate and dominate the instruction in the lower schools, but also should, in all likelihood, influence the whole thought of the AAF.[31]

The 1946 BOV agreed, seeing great promise in the new university in general and AWC in particular. However, it cautioned that

> [Air Force] doctrine may become so fixed, even when labeled "progressive," that it becomes a question of adopting heroic measure in order to keep up with technological advance. Self-satisfaction and self-assurance will be the constant hazards.[32]

The BOV's fears were realized in 1949 when the Orleans report complained that AU put too much emphasis on keeping pace with new developments and not enough on substantive education.[33] Furthermore, the 1951 BOV criticized AWC for giving short shrift to broad subjects and effective "independence and initiative" in thinking. This slight resulted in rote-style learning and a lapse in significant doctrinal research.[34] The latter problem persisted into 1963: "The Board has the impression that the Air Force, being the youngest of the three services, has more difficulty than senior services in developing and presenting clear-cut views on new doctrine."[35]

AU has always sought to be an "Air Force doctrinal, educational, and research center."[36] But encouraging truly free and innovative thinking proved difficult. The 1962 BOV tried to account for this problem by concluding that the unique needs of

the military demanded research that was not in the traditional academic mold. Nevertheless, research remained a significant shortcoming at Air University. Despite the fact that Air Force research involved "discussion of social, political, and cultural problems," the board noted that no system existed for verifying that research with civilian scholars in the social sciences, as was in place at AFIT for verifying scientific or technical research. The board recommended that AU improve its contacts with civilian universities to ensure the accuracy and effectiveness of its analyses and assessments.[37]

Thus, the 1963 BOV applauded AU's 10-year plan (1963–73) to institutionalize research and expand doctrinal studies.[38] To further those aims, the board encouraged AU to assign a "small group of brilliant scholars" to do meaningful research and develop doctrine:

> For instructional and planning purposes as well as for the benefit of the total defense effort, the Board observes a need for clear, long-range thinking on such matters as doctrine and the role of the Air Force and its programs in relationship to the other defense agencies. A cadre of highly-qualified research scholars—civilian and military—assigned to Air University on a long-term basis, could conduct research in these areas as needed and provide the necessary stimulus for careful, thorough, long-range consideration of basic questions underlying future policy and doctrinal decisions.[39]

Student Selection Procedures

In 1949 the Orleans report noted that selecting and training future Air Force leaders was the primary mission of professional Air Force officers.[40] AU's role was central to this process. BOV assessments added that AU's schools should use entrance exams to screen applicants and thereby refine the process of selecting the best and most promising officers for attendance.[41] Furthermore, Gen David Schlatter declared that

> our success is not going to be measured by the quantity or number of students we put out. It is going to be measured by the quality of those students, and on the correctness of our doctrines and concepts.[42]

Despite these lofty intentions and a general perception that PME schools were doing a good job, dissatisfaction developed in some quarters of the Air Force over the quality of AU graduates. Officers reportedly had difficulty in clearly stating Air Force positions and coping with "crash projects." At Headquarters USAF, research and staff work by AU graduates were consistently incomplete as well as poorly written or briefed. Moreover, briefers lacked a satisfactory breadth or depth of knowledge on their topics.[43] Yet, one study reported that

> opinion surveys of major commands and senior Air Force officers tend to support the present programs of the professional military schools. . . . The majority of alumni and students express favorable opinions about the present professional military schools and their programs.[44]

These sentiments were well documented: 80 percent of the 1960 AWC class gave the school high ratings for utility and quality, and 75 percent of the 1961 ACSC class said the curricula met their needs "adequately or extremely well." Similarly, approval ratings of selected aspects of SOS from Class 61-A ranged from 67 percent to 86 percent. Additionally, surveys of Air Force major commands (MAJCOM) and senior Air Force officers in 1962 showed that the curricula of schools were more or less in line with the perceived need of the "real Air Force."[45] Nevertheless, the Air Force chief of staff maintained that Air Staff officers could not competently perform their work.[46] A closer look at the surveys revealed that Air Force officers were only vaguely aware of the intent or value of PME.[47]

Evidently, AU's efforts to seek the best students were thwarted by a general feeling, noted by the AFERB Task Group, that PME did not contribute significantly to the career development of officers. That is, no clear correlation existed between PME and evaluations, PME and promotions, PME and select job

assignments, and PME and quality officership. In short, PME was not tied to long-range Air Force needs. Consequently, MAJCOMs withheld their best candidates, and the best officers chose not to attend or attended too late for their education to be optimally useful. As one observer put it, the best officers sought assignments that met more "immediate demands upon their talents."[48]

Funding

As pointed out in chapter 2, AU's educational mission remained essentially the same throughout its history, but at times the costs of providing PME seemed prohibitive. This issue was most significant during the 1960s. Following the launch of Sputnik in October 1957 and the subsequent advent of missile technologies and sophisticated weapons systems, the US military struggled to stay ahead of increasingly rapid political, economic, military, and social changes.[49] A national symposium on educational needs sponsored by the AFERB in 1960 stated its current position on PME:

> We are trying to produce officers who will grow throughout all of their years of service, who will stay ahead of change, who will make change.
>
> There must be no waste and no confusion. Our professional education program costs many millions of dollars each year. . . . But *we must have an educated officer corps, however much it costs,* [emphasis added] if the facilities and equipment in which the nation has invested billions are to be used effectively.[50]

AU has lived with the prospect of having its programs shortchanged ever since the economic cutbacks that followed World War II. The second BOV (1947) cautioned that the Air Force should carefully discriminate between appropriate cuts for wartime needs and dangerous cuts in postwar needs (i.e., education).[51] Similarly, the fourth BOV (June 1948) felt that a good AU was not a luxury: "Neither the Air Force nor the nation can afford less than a complete fulfillment of the Air University mission."[52] The boards insisted that cutting back at AU would be

a false economy and would inhibit the Air Force's ability to exploit future opportunities.

Yet, like AU's difficulty in obtaining the best students available, parsimonious funding hurt the university and reflected its low priority with the Air Staff. Money problems persisted, despite pleas by numerous observers on AU's behalf. As the 19th BOV (1963) plaintively noted, in light of the Soviet Union's acceleration of its own educational programs, the Air Force's failure to respond in kind was especially disturbing.[53]

Commentary, 1968–87

Many of the same problems and issues peculiar to the first period of AU's history carried over into the second period. However, emphasis shifted from AU funding, which stabilized during the 1970s at around 1 percent of the annual Air Force budget, to making PME relevant to the workaday world of the "real Air Force." High-technology, rapid changes, and the substantial costs of systems and operations had a significant effect on the way Air Force officers perceived their service. Because of the Air Force's concern with managing its business and operating effectively within the defense and government bureaucracy, the service often overlooked the need to educate officers as professional war fighters. Critics in the last two decades narrowed their focus to faculty qualifications, curriculum content, and teaching methods. The questions about AU's mission and success also became much more public.

Faculty

Although General Fairchild once remarked that perhaps the best AU could hope for was to make do with the best faculty it was likely to have, other parties had higher hopes.[54] In 1968 the BOV supported efforts to improve the academic qualifications of the faculty, reasoning that

> the most effective stimulation of original critical thinking—which is necessarily one goal in all Air University programs—is found in personal teaching relationships between, on the one hand, knowledgeable and imaginative instructors and, on the other hand, students who have confidence in their instructors and who are continuously motivated to evaluate their subjects and to think in innovative ways.[55]

In 1972 the BOV recommended that AU consider "a flexible policy of faculty composition, emphasizing ability, ideas, and dynamism rather than rank in selecting service personnel for the faculty of the Air War College."[56] However, only four years later the BOV recommended that most of the faculty be plowbacks because "the new emphasis on 'specific mission training' requires faculty who know the Air Force mission, its technical uniqueness and its strategic and tactical policies and capabilities. . . . [Thus] the faculty and students are drawn closer together and the program is enriched by the 'first-hand' impressions of erstwhile students who become faculty."[57] But by 1978 the BOV had broadened its perspective:

> Continuing efforts should be made to underscore the desirability of a tour of duty on the AWC faculty, specifically in terms of future promotability. Only in this way will outstanding officers of exceptional intellectual ability be attracted to AWC; only in this way can AWC become a center for scholarly research and creative thought in the field of aerospace warfare. It should be a primary goal of AWC that at any point in time it count within its faculty a number of the most creative and thoughtful minds in the Air Force whose research and scholarly activities with regard to aerospace warfare are of recognized importance to the United States Air Force.[58]

This concern with recruiting and maintaining a capable instructional staff was typical of BOV commentary throughout the period and may be found in the report of the most recent board included in this study: "The [1987] BOV believes faculty improvement to be among the most important steps in the current effort to further enhance the quality of AWC programs and urges continuing steadfast support in this area by Air Staff and other Air Force leadership."[59] Although most commentators agreed that AU

needed good faculty, they had different ideas about the makeup of that staff—whether military or civilian or both—and were concerned about the use of guest lecturers and learning from one's peers.

Responding to the *FY 77 Appropriation Bill Conference Report of the House and Senate Armed Services Committees*, the assistant secretary of defense for manpower and reserve affairs noted in his *Review of Faculty Mix at the US Service Academies and the Senior and Intermediate Colleges* that civilian guest lecturers customarily provided a diversity of attitudes, perspectives, and opinions. But he added that guest lecturers should only supplement the resident military and civilian faculties of the staff colleges and war colleges.[60] Similarly, Amos A. Jordan and William J. Taylor, Jr., lamented the war colleges' "overreliance on guest lectures, which forces the students into a largely passive role."[61] Maureen Mylander was even more critical, claiming that the military faculties of the war colleges were "primarily administrators and discussion leaders with scant knowledge of subjects they 'teach'. . . . As a result, students claim they learn more from one another than from lecturers. This has its advantages, but, more often than not, discussion descends to the level of lowest common denominator."[62] Likewise, the 1975 Clements committee stated that "it is the capability of the resident faculty [not peer learning and guest lecturers] which determines the level of excellence achieved in the educational process."[63]

The assistant secretary's review also recommended that the preponderance of PME faculties be composed of well-qualified officers:

> Because of the predominantly military emphasis of these courses, most of the resident teaching faculty should be professional officers, qualified both by military experience and academic training. Since these courses (especially at the senior colleges) deal extensively with such matters as the national policy process, economic policy, systems analysis, strategic thought and international affairs, they could benefit from a leavening in their faculties of civilians both from the academic world and from such places as the Department of Defense, State Department, Central Intelligence Agency, or similar agencies. . . .

> In selecting military faculty, these colleges should seek officers who most closely meet the following qualifications: specific military expertise, relevant academic training, and teaching experience. The colleges should seek a reasonable proportion of officers with high promotion potential. Officers who have taught at the service academies (especially those with the Ph.D) offer a special resource which should not be overlooked in selecting military faculty.[64]

Faced with the reality of entrenched Air Force practices, attitudes, and personnel policies, however, these idealistic goals did not fare well. Writing to Gen David C. Jones, Air Force chief of staff, on 17 June 1977, Lt Gen Raymond B. Furlong, AU commander, took a more practical approach. Believing that "a major limiting factor in the continued improvement of the Air War College is the quality of the faculty and in particular substantive mastery by those in charge of major areas of instruction," Furlong requested Jones's permission to hire four AWC and three ACSC professors from the ranks of recently retired senior officers.[65] Four months later, an action memorandum to the secretary of the Air Force proposed that two-thirds of the AWC and ACSC faculties be civilians and that a significant number of the civilians be retired officers. This proposal sought to "save [the Air Force] active duty manpower spaces, save money, and improve the quality of education." The memorandum also argued that by using a civilian faculty, the Air Force could avoid problems involving credentials, selection procedures, teaching ability, and personnel policies that were typical of a military faculty.[66]

Theodore J. Crackel, however, was among those commentators who opposed a majority civilian faculty, maintaining that "no military establishment has ever retained its vitality after surrendering its intellectual destiny to those in mufti." Indeed, he went so far as to propose a uniformed career track in education:

> With the creation of military education specialties within the services, the nation might one day be able to turn to the services again for intellectual expertise in areas that fall naturally within the military realm—like strategy, tactics, military history, and military geography—rather than turning, as now, to scholars from think tanks and academia, whose

> influence is out of all proportion to their experience and their ultimate responsibility for the actual conduct of vital military affairs.[67]

Perhaps the most significant study of AU's faculty problems, though, favored an undetermined mixture of military and civilian instructors. This study was a response to Secretary of the Air Force Verne Orr's challenge to Lt Gen Thomas Richards, AU's commander, "to provide the best program at the three major and distinct Air University officer PME schools."[68] Noting that the development of a fully capable faculty could not occur without the support of the secretary of the Air Force, the chief of staff, four-star generals, and the personnel community, the report recommended the following makeup: "[1] short-term military faculty brought in from the operational Air Force; [2] military officers . . . dedicated to professional military education; [3] distinguished visiting civilian faculty; and [4] civilian subject matter experts."[69] Looking to the future, the study's task force was especially interested in cultivating the second category of military faculty:

> [They must] combine the highest level of academic and professional military expertise with gifted teaching ability. The Air Force must take bold and perhaps radical steps to produce these people. They must be identified long before they become eligible to join the faculty. Some must be sent to AFIT for Air Force sponsored degree programs to develop their academic competency. They must be tracked throughout their careers. It will take years to develop this cadre; some will eventually become permanent military faculty on the model of the West Point permanent associate professors. . . . These are people who make a commitment upon joining the faculty to serve the remainder of their career at Air University, and in return the Air Force must make a commitment to retain them in such a career field.[70]

Curricula

Commentators on AU have been just as concerned with the university's curricula as they have with its faculty. Most of the pejorative commentary on curricula has come from outside the Air Force, while favorable reviews are more typical of Air Force observers. For example, the *Officer PME Study* of 1980 stated that

> it was established at the outset of the study that the academic quality of resident officer PME programs met the requirement of excellence. Current PME curricula are considered to satisfy nearly all known requirements for subject matter coverage and learning outcomes.[71]

However, frequent tinkering with the curricula (based on BOV recommendations, surveys of PME graduates and their commanders, and a variety of conferences and studies) implied that even internal commentators were not completely satisfied.

At its more abstract levels, criticism of curricula has dealt with the relative merits of broad versus specialized education, discussed earlier. At the more concrete level, this criticism addresses core curricula as opposed to individually tailored curricula, breadth versus depth of study, and the types of subjects covered by the curricula. At all levels, AU has shared the limelight with other US service schools.

Core versus Individually Tailored Curricula. The preference for a core curriculum rather than one based on individually tailored subjects and electives (or vice versa) has varied over time and among the different service schools. As is the case with teaching methods (lectures, seminars, case studies, war gaming, etc.), no optimum mix of curricula exists. Indeed, Frederick H. Hartmann stated that to prefer one mix over another is merely a value judgment; students will profit or not, regardless of the mix.[72] In 1980 the BOV recommended a balanced mix:

> The BOV reviewers endorse the basic plan of core curriculum complemented by an array of elective courses and buttressed by opportunities for developing and demonstrating individual initiative through writing and research as well as opportunities for interacting with influential outside speakers and civilian leaders.[73]

In the early 1970s, the Naval War College, "dissatisfied at the lack of depth in a core curriculum which shared the student's time with other methods and areas of learning, concentrated the student's efforts on a rigorous common core, with only relatively minor emphasis elsewhere."[74] This change was part of Vice Adm Stansfield Turner's reform, which even eliminated "the associated

master's degree program with George Washington University which, Turner said, was one of the most intellectually demanding parts of the curricula but compromised his control of students' academic efforts."[75] (A decade later, however, the three major areas of the core curriculum—defense economics and decision making, policy and strategy, and naval operations—were augmented by some 45 electives.[76])

The Army War College traditionally followed a core curriculum, but after 1966 it "moved slowly toward providing some specialized course work within the overall program of producing a generalist."[77] In the mid-1970s, Maj Gen Franklin M. Davis, Jr., commandant of the college, departed from the usual core curriculum and instituted one tailored to the needs of individual students. General Davis believed that the curriculum

> must challenge, in a genuine and compelling way, each officer.... [And it] must provide multiple opportunity for the individual to take study initiatives, to firmly grasp curriculum opportunities, and, above all, and this is the key point, I think, the curriculum must exploit the professional success the individual student has already demonstrated.[78]

By exploiting the potential of electives and an individually tailored curriculum, the Army War College sought to meet the needs of both generalist and specialist.[79]

AWC and ACSC have made similar changes. For example, "in the early 1950s the intermediate PME level included several special staff courses for officers in logistics, comptrollership, intelligence, communications, and electronics, as well as a field officers' course principally for operations officers."[80] At AWC in 1968,

> an elective program was introduced to offer concurrent courses in communicative and mathematical skills plus a few selected disciplines designed to broaden student backgrounds and to assist them in becoming articulate advocates of aerospace power. This original elective program included five voluntary communicative, language, and mathematical skill courses plus a requirement for each student to complete one of eight special electives that included such diverse subjects as lessons learned in combat, quantitative analysis, and area studies.[81]

A similar elective program began at ACSC in 1968. Its purpose was "to offer graduate level courses of the highest professional quality so that every student may pursue in greater depth selected PME subjects of special interest and need."[82] In the late 1970s, ACSC "provided opportunities for students destined for personnel and comptroller assignments to attend and receive full credit for the Professional Personnel Management and Professional Military Comptroller courses."[83] A holdover from the specialized ACSC courses of the 1950s, this program was perhaps more properly related to the generalist-versus-specialist issue rather than an example of an individually tailored curriculum.

The 1975 Clements committee directed that "the curriculum of the [war] colleges should contain a portion which permits each individual officer to tailor his academic experience to his particular background and his Service career." These electives were to "be confined to topics which fall within the specific mission-field [aerospace warfare] of the college [and] involve thorough and rigorous examination of the subject matter."[84] The committee, however, did not recommend that the curricula be completely tailored for each student; after all, it opposed "cooperative degree programs that are not integral parts of Senior Service College curricula, or that include prior and subsequent activities not directly related to the Service College experience."[85]

Finally, the minutes of the MAJCOM Commanders PME Conference of 14–15 January 1980 noted that "the conferees were impressed with the TIP [Tailored Instruction Program—at ACSC]; however, some conferees suggested that the ACSC core program is not responsive to command requirements because warfare education is not provided in adequate depth." TIP included "courses on strategic plans and operations as well as theater operations" but shortchanged chemical and electronic warfare.[86] Evidently, then, few service schools remained satisfied with their curricula; consequently, they made frequent changes in an effort to find the right mix of core, elective, and tailored subjects.

Breadth or Depth. Criticism, especially by outsiders, of the extent to which PME schools cover their subject matter is a function of the perceived purpose of the schools. Therefore,

commentators advocate either a general or detailed treatment of subjects, depending on whether they see AU providing either broad or specialized education. Maureen Mylander stated that "if the only object is to transform specialists into generalists and to expose them, however briefly, to the complicated range of factors affecting top-level decisions, the war colleges do a good job." However, she continues, "first-rate leadership in the military calls not only for good tacticians or technical experts but also for intelligent strategists or thinkers to take a long-range view of developments and operations." She also noted that the war colleges do not expect their students to absorb the vast quantity and range of material presented to them but merely to "sift out what interests them and ignore the rest." Thus, she argues that the colleges fail to create climates conducive to thinking: "The schools permit their charges to range over vast expanses of subject matter but keep the herd moving so fast that there is scant time for intellectual grazing. The danger of this approach is that it creates an unjustified sensation of expertise."[87] Similarly, Edward Katzenbach wrote that "breadth of view as an educational objective is so overriding that it virtually precludes depth of view."[88] Williamson Murray was even more critical. He observed that by trying to cover everything a future flag officer may need to know, the war colleges covered nothing in depth. Alternatively, he favored a war college curriculum which would "concentrate on two or three subject areas in order to give officers sufficient depth and understanding to continue their professional education in those areas after they return to their careers."[89]

The alleged shallowness of the PME curricula is of equal concern to military commentators. For example, Lt Gen R. G. Gard, Jr., president of National Defense University, recommended that the commandants of the National War College and the Industrial College of the Armed Forces "reduce our coverage in favor of more rigorous treatment of what we expect the student to learn."[90]

Course Content. Although the content of the SOS curriculum has received little adverse criticism, few commentators have been able to agree on appropriate course material for the staff colleges

and war colleges. Again, the commentators' perspective is largely dependent upon whether they feel that PME should provide a broad or specialized education. Related to this situation is the question of whether PME should concentrate on military matters or include such disciplines as domestic and international politics, economics, and so forth. Because of the variety of opinions on this issue, we can expect the content of PME courses to continue to change. Indeed, the 1971 Air University Ad Hoc Committee on Cost Reduction touted AU's "dynamic professional education curriculum; one that is broadly structured on the firm foundation of experience, but is specifically responsive to the changing needs and objectives of the Air Force."[91]

The committee was especially impressed with the advice on curriculum that AU received from the MAJCOMs and Air Staff:

> Each year major commands and the Air Staff review PME curricula to assure they are responsive to current Air Force needs. The increase in subject matter recommended for inclusion in PME as a result of these recurring reviews has been so great that a selective process has been required to assure that only material most responsive to Air Force needs is presented within the time limitations imposed by present PME course lengths. In the final curriculum construction process for each academic year, PME staffs and faculties and an Air University Board of Curriculum review structure and refine each curriculum.
>
> In addition to their own judgements based upon extensive experience, the faculties and staffs of the PME schools have and are continuously gathering data from such sources as: students and alumni; military and civilian experts in specific fields; supervisors of Air Force officers; key senior Air Force officers; major governmental and military agencies; civilian industry and research agencies; colleges and universities; and Air Force boards, committees, and task groups.[92]

Even the BOV could not decide on who should influence the curricula. In 1974 it recommended "a more intensive and systematic method whereby the major air commands might influence more directly the pattern of the curriculum."[93] Two years later, however, the board urged "that curriculum development be largely the jurisdiction of the Air University faculty and administration."[94]

Katzenbach, who believed that the curricula of the staff and war colleges were too strongly influenced by civilians, favored the study of military doctrine. Thus, staff college officers should learn "to operate within the confines of a body of established doctrine [whereas] war colleges should be the locus of the development and analysis of doctrine itself."[95] Similarly, Murray stated that because the war colleges were unwilling "to place war and strategy at the heart of their curricula," they failed to understand "the complex interplay between strategy, operational realities, policy, and the popular will."[96] More precisely, John M. Collins remarked that the staff colleges "properly emphasize tactics, doctrine, and logistic support far more than defense strategy." On the other hand, he charged that the war colleges fail to formulate or even adequately teach strategy because their faculties are not up to the task, too little time is devoted to the subject, and courses stress "*what* to do far more than *how* to do it."[97]

Likewise, Rear Adm Henry E. Eccles stated that "if we are successfully to educate officers for high command, we must understand fundamental military theory and use it as a guide in the development and conduct of any war study curricula." He opposed using the war colleges as "preparatory schools for Pentagon duty," where officers learn staff skills and study "political science, international policy, organization and law." Eccles felt that such a plan would detract from the study of military power and would leave the armed forces unprepared "to provide creative leadership in professional military knowledge."[98]

Commanders of the various service schools also voiced their opinions about the content of PME courses. According to Admiral Turner of the Naval War College (NWC), the nation's war colleges must adopt intellectually demanding curricula that widen their students' horizons and allow them to place strategic and operational issues in context. Otherwise, the military's senior officer corps will not be prepared for "the large military and strategic issues that confront America in the late twentieth century."[99] Accordingly, NWC's rigorous academic program required students to solve problems in logistics, employment, and tactics, and to "study . . . strategy through historical cases rather

than through international relations or political science."[100] Richard Megaree points out that although naval history was the premier discipline at NWC under Rear Adm Stephen B. Luce and Capt Alfred T. Mahan, by World War I "the technical and operational imperatives of the new Navy" had supplanted the historical approach. Thus, professional and technical training predominated at NWC until Turner revamped the curriculum in 1972. The admiral's mission was to enhance the "professional capabilities of [NWC] students to make sound decisions in both command and management" and cultivate "logical reasoning capacity" rather than an "encyclopedic knowledge in multiple fields."[101] Air University's Lightner board of 1973, however, questioned the effectiveness of Turner's emphasis on history, maintaining that a study of international relations or world environment would be just as effective if not more so.[102]

Like the Naval War College, the Army Command and General Staff College of the early 1980s emphasized tactics, planning, and the communicative arts:

> In the core curriculum, all students will continue to receive tactical fundamentals, procedures and the concepts of military operations. But combat arms officers and certain combat support officers will be required to take additional tactics courses.
>
> [Instruction in planning will teach officers to understand] the diverse and complex requirements for deployment of Army forces to contingency areas, air and sea movement planning, the design of appropriate forces for a given scenario, and the priority and sequencing of Army force deployments to a theater of operations.
>
> [Courses in communication will train] the student to approach a problem systematically, seek out the facts, analyze the issues and reason to a logical conclusion.[103]

Some commentators took issue with this emphasis on "purely military matters." For example, to charges such as "the [war] colleges spend too much time on broad national security matters," John McCaughey responded that war is a political act, that war can only be fully understood in its context.[104] Similarly, besides being "a true expert in the conduct of military operations," the military

professional—according to Donald F. Bletz—should "understand the society which he serves . . . be knowledgeable of the world in which he lives and . . . have a firm grip on the very complex concept of the utility, or disutility, of military force within the context of the assumed domestic and international environment."[105] Acknowledging that few officers will have to deal with war on such a lofty plain, McCaughey concluded that

> maybe what we really need to produce at the [Army War] college are people who understand how to get along with the other services as planners and operators, people who can deal with the State Department when they're dealing with politics in some unpleasant part of the world.[106]

To some extent, the content of a PME curriculum depends upon who is analyzing that curriculum. Maj Gen DeWitt Smith of the Army War College remarked that "this college is not a trade school, dealing with techniques . . . nor is it aimed only at preparing its graduates for their next assignments. Neither is it a graduate institution in international affairs, important as that field is, and its focus is not solely on national security policymaking."[107] In actuality, however, some of the subjects taught in war colleges during the early 1980s included

> national purpose, national strategy, force planning and resource management, theater operations, war gaming, management techniques, domestic issues, domestic priorities, ethics, law, minorities, media, the evolution of military strategy, international trends and issues, regional U.S. interests, risk, [and] leadership.[108]

The diversity of subjects actually taught suggests the lack of consensus over the proper substance of PME courses and gives us a good idea of how revolutionary Admiral Turner's changes were.

Changes in Air Force PME courses proceeded from recommendations of various groups and individuals. For example, a memorandum from Maj Gen Robert Ginsburgh, director of USAF information, to Gen George S. Brown, Air Force chief of staff, in December 1973 stated that "the Senior Service Schools have generally put too little emphasis on the military side and too much emphasis on 'get-rich quick' survey-type approaches to

international relations, politics and economics." According to General Ginsburgh,

> SOS, ACSC, AWC could help our officer corps by doing more work with them on the conceptual and philosophical underpinnings of the reason for our existence as a separate Service: Airpower is different and is dominant. If time for such work must come out of present curricula, in my opinion the surveys of international relations, politics and economics could be shortened.
>
> I believe that the Air University should not only put greater stress on military aspects, but specifically on airpower. The study of airpower should be the keystone of the professional military education at Air University. The studies should not be limited to airpower, but the student's focus should be airpower. He should understand how airpower affects and is affected by the other instruments of military power and by the political, economic and sociological factors.[109]

Lt Gen F. Michael Rogers, AU commander, replied that "Air Force principles, concepts and doctrine for the development and employment of aerospace forces are central themes in all of our PME schools."[110]

After succeeding General Rogers as AU commander, Gen Raymond Furlong directed the commandants of AWC and ACSC to change their curricula:

> A change in the curriculum for AWC in the next academic year [will] expand on the use of airpower. I expect that we can do a better job in this area in ACSC as well.
>
> The object of this shift in AU emphasis is to increase the value of AU education to its professional students and the Air Force and to make substantive contributions to our knowledge of airpower and its application. I expect an increased emphasis to be placed on thorough research, analysis, and creative thinking.[111]

Further, Furlong directed the colleges to cover tactical air; airlift; conventional bombing operations by the Strategic Air Command; strategic forces; theater communications; historical and comparative theater air organization; joint and combined operations; and Soviet doctrine and capabilities. He even suggested presenting the subjects from a historical perspective.[112]

Subsequently, the Clements committee directed that aerospace warfare comprise approximately one-third of the AWC curriculum.[113]

On 6 October 1976, General Furlong briefed the Corona West Conference that

> the art of war is the province of AWC [and that] Air War College has shifted its emphasis from national security and grand strategy toward employment with a heavy emphasis on air power. . . . The perspective for employment is that of the theater air commander—a level that we view as demanding both strategy and tactics and one which requires a broad knowledge of tactical missions and decisions on all components of such a force. Europe is the theater of primary attention.[114]

Two years later the 1978 BOV noted that the AWC should "provide opportunities to research, analyze, and discuss current doctrine as well as new ideas pertaining to the management and employment of airpower."[115]

The effect on ACSC's curriculum was essentially the same since, for years, it has closely resembled AWC's. The justification for the similarity is that, since ACSC is the last PME for most officers, they should benefit from a more advanced curriculum, especially because so many of them come to ACSC with experience. Nevertheless, from time to time "corrections" are made. For example, a review of the Alpha Group report stated in 1974 that

> the staff review group agrees that ACSC is terminal for many officers; however, it does not think that fact should be a major consideration in curriculum planning. The major consideration is to prepare officers for typical assignments within five to six years after graduation.[116]

Although the 1975 BOV did not explicitly oppose this view, it did note that

> this shift [preparing majors and lieutenant colonels for the next five to six years of their careers] has entailed certain sacrifices, particularly in those areas of the curriculum originally designed to provide officers with an understanding of the broad dimensions of international relations and national policy formation. . . . Transitional problems of student morale

> may develop as students eager for an intellectually broadened experience are required to spend more time concentrating on fundamental [staff] skills and precisely defined performance.[117]

Although commentators have disagreed over the particulars of course content and the goals of PME, most of them would probably concur with Katzenbach's assessment that

> to date the trend in the war colleges has been to discuss national problems, hopefully tying these in some way to military problems. This should be reversed. Military problems should be central to the discussion, due reference made to the pressures, political, economic, and technical, which prescribe the peripheries within which solutions must, or can, or cannot be found.[118]

Nonresident Professional Military Education

To compensate for changes in curricula at AU schools, some commentators have advocated an expanded use of nonresident courses. For instance, the group who reviewed the report of the Alpha Group, mentioned previously, proposed that an

> ACSC nonresident program could be established as a mandatory requirement for promotion to lieutenant colonel or as a prerequisite to resident attendance at Air War College. It would be principally a seminar program with a correspondence program available to officers who could not attend the seminars. It is also suggested that the seminar program involve an arrangement where officers could attend two to four hours per week during normal duty hours.[119]

The review group noted, however, that this proposal, based on a Royal Air Force program, "would probably be unenforceable and therefore of questionable worth. Past attempts to require officers not selected for resident PME to complete courses by nonresident programs have not met with success."[120] Unsurprisingly, then, in a memorandum to Secretary of Defense Harold Brown on 3 April 1978, Vice Adm Patrick J. Hannifin, who was making the consolidated Joint Chiefs of Staff recommendation against initiatives to reduce the course length of the staff colleges to 22

weeks, rejected the suggestion that officers be required to participate in nonresident PME programs:

> The best officers—those who should attend in residence—are usually the busiest. They tend to hold key positions and be involved in important projects requiring long hours. The Services do not consider it equitable or feasible to establish and adhere to a rigid prerequisite that such officers complete an off-duty nonresident professional military education program in order to attend the resident school.[121]

Furthermore, the 1980 Air Force *Officer PME Study* rejected the concept of nonresident PME as a prerequisite for officers selected to attend AWC and ACSC in residence. The study concluded that the program was impractical because it would require early selection to allow candidates enough time to complete it before beginning the resident school. Furthermore, the study considered the program inequitable because it placed "better" officers in the most demanding jobs at a disadvantage.[122] Nevertheless, the 1987 BOV, facing an austere budget, recommended that

> the present [ACSC] curricula should be reviewed to determine which areas might lend themselves to instruction in the Associate Program. The Resident Program, although shortened, might provide opportunities for students to spend more in-depth time in the resident-essential instructor-led curricular areas. Again, a sufficient amount of material would have to be accepted in the first program to permit the second program to occur.[123]

Similar proposals have targeted the SOS curriculum. For example, the 1980 Vice Commanders PME Conference stated that

> SOS should be reviewed with the objective of reducing its length to permit resident attendance by a larger percentage of junior officers. The Study Group should investigate the development of a "hybrid" correspondence/resident course in which advanced preparatory materials would be completed in the field prior to resident attendance. Some portion of SOS might be taught at base level to help decrease the time spent in residence.[124]

Similarly, the 1981 BOV recommended that "appropriate parts of the [SOS] curriculum [be made] available to potential students prior to their attending SOS."[125] The 1985 BOV also

recommended that SOS "consider making some portion of the nonresident program a prerequisite for the resident program to allow for some upgrading of the content of the resident program as well as some shortening of both programs."[126]

Thus, one may explain such change as a pragmatic response to a changing environment or as the result of the Air Force's failure to decide on the purpose of PME. In general, internal critics seem to favor the former explanation and external critics the latter.

Teaching Methods

Teaching methods used by AWC and ACSC that have come under the scrutiny of commentators include the lecture and seminar, as well as independent study and research. Criticism of SOS's methods is almost wholly confined to the practice of teaching leadership, especially by using competitive team sports.

Lectures and Seminars. Civilian commentators tend to criticize auditorium-size lectures, especially those delivered by guest speakers. They maintain that such lectures, even those conducted by permanent faculty, are essentially passive because there is little opportunity for student participation. Guest speakers compound the problem because their subjects may or may not support lesson objectives and probably don't complement each other. Furthermore, these speakers, who are senior-level military and civilian officials rather than academicians, seldom have an effective teaching style. Nevertheless, the Lightner board held that

> the distinguished lecturer program should remain the nucleus of the core curriculum. The lecture method employed by Air War College as presently supplemented by reading selections, question and answer discussion periods, and general discussion seminars, should rightfully be considered a balanced learning experience.[127]

The board did note, however, that "since 1970 it has been AWC policy to de-emphasize formal lectures in favor of methodologies requiring active student participation, as in individual problem solving situations and war gaming exercises."[128] But the 1976

BOV remarked, "In the hands of a competent lecturer, [the lecture] is probably the most efficient system for imparting information, stimulating interest, and sustaining motivation."[129] The 1983 BOV, though, moved away from this position:

> Consideration might well be given to how to reduce the time spent in this mode [lecture] and increase the time spent in seminars, which are perceived by both the students and the [BOV AWC] subcommittee as more educationally rewarding, and in research, which the board seems to view as more valuable than the students do.[130]

Not everyone, however, agreed that seminars were valuable, particularly those led by plowbacks and students. Although General Fairchild envisioned seminars as good environments for problem solving,[131] commentators observed that they can easily degenerate into bull sessions—exchanges of ignorance, misinformation, or irrelevant material. Furthermore, the seminar too often becomes a "haven for the unprepared—both students and faculty. The seminar must be carefully supervised to assure its quality, and the seminar leader must be exceedingly intelligent, well-informed and adept in holding the interests of participants."[132]

Independent Study or Research. Admiral Eccles believed in research. He felt that war colleges should not only understand and teach the fundamentals of military theory, but also develop new strategic, logistical, and tactical concepts and theories.[133] Similarly, the 1983 BOV indicated that ACSC's "Research Project is central to the educational experience provided the officers who are destined to be the future leaders of the U.S. Air Force. [The research project] is the largest single component in the curriculum and it should continue to be."[134] However, commentators have pointed out that PME schools reserve too little time for students and faculty to pursue independent study, as well as read, think, and reflect.[135] Indeed, the 1973 Lightner board commented that an Air Force directive requiring

> faculty members [to] be active researchers and contributors to professional military knowledge is impractical and inconsistent with

> reality . . . because of [the inordinate amount of time spent on] duties in planning, instructing, seminar leading, guiding, and counseling.[136]

Consequently, the 1975 Clements committee directed war college commandants to develop research programs that would be suitable for a large portion of the faculty.[137]

Insofar as AWC and ACSC students are concerned, research programs designed for them were meant to promote "self-improvement and professional growth [although] the emphasis has shifted to producing studies which contribute to the solution of current Air Force problems."[138] Some students, however, suggested that this time be spent for other purposes:

> While time is available in the schedule for individual study and reflective contemplation, more opportunity should be provided for intellectual synthesis of the conceptions generated by discussion and lecture and the pragmatic command experiences which the students almost without exception have themselves undergone.[139]

Although a number of students abuse such "free" time, proponents of the concept argued that the advantages gained by those who use the time profitably would outweigh the disadvantages of those who waste it.

Research, whether by faculty or student, has three groups of advocates: (1) those who are concerned with research as an exercise in thinking (recognizing and defining a problem; gathering relevant data; synthesizing solutions; presenting, selling, and defending those solutions); (2) those who believe that the war colleges should, like other centers of higher education, contribute to knowledge in their areas of expertise; and (3) those who believe that students should do relevant research on current Air Force problems. Accordingly, the 1971 BOV wanted to know whether AWC student research activities were

> aimed at the educational development of the student, not at the solution of problems for the Air Force [or whether they were] aimed at increasing his knowledge *or* at developing his problem-solving and writing ability. The objective stated in AU Reg. 23-16 seems to emphasize the former

> [increasing knowledge]; the Evaluation Report submitted by the advisor seems to relate to the latter.[140]

Unable to find an answer, the board recommended that AU specify the purpose of student research. In short, like so many other variables associated with PME, the issue of whether student or faculty research is a proper activity of staff colleges and war colleges remains unresolved.

Leadership at Squadron Officer School. The SOS curriculum is designed almost exclusively to prepare officers as military leaders. Because both ACSC and AWC assume that their students have already mastered leadership skills, their curricula emphasize different areas. General criticism of AU also reflects this distinction. That is, outside commentators, concerned with the broad knowledge and abilities of Air force officers rather than their leadership skills, confine their criticism to the war colleges, occasionally mentioning the staff colleges. Most criticism of SOS, on the other hand, comes from insiders, and there has not been much of that. In fact, most observers have complimented SOS programs. The 1978 BOV, for example, commented that "changes in the programs should be made only when clear deficiencies have been discovered and when the means of improvement are available. It is too good to be tampered with." The same board, however, did question "the efficacy of the sports program" as a method for teaching leadership.[141]

Indeed, the utility of team sports at SOS is a prime point of contention among commentators. For example, the Vice Commanders PME Conference of January 1980 stated that the competitive team sports program "should not be presented under the 'guise' of leadership," but the *Officer PME Study* of February 1980 contains a long defense of team sports as a means of developing leaders at SOS.[142] In 1980 the BOV noted that the purpose of SOS's Leadership Skills Program "is to make the students more aware of their leadership skills and then give them the opportunities to further develop these skills."[143] The 1986 BOV elaborated on this idea:

> The mission of SOS as stated is "to provide the professional development of . . . officers." In the analysis of what is needed to develop officers, leadership is the big key word. Leadership is tied into every essential element of being an effective officer. The SOS approach appears to be one of nurturing the development of leadership by exposure to problem situations involving team play from which character ties of leadership—though in many cases unquantifiable—will evolve. In reading much of the material presented, one primary characteristic of leadership, as defined by SOS, appears to be efficiency.
>
> The contention that leadership can be taught does not have universal acceptance. However, in terms defined by SOS in providing opportunities through 1) problem solving situations, 2) exposure to historical case examples, 3) communication skills, 4) knowledge of the employment of the Air Force, and 5) athletic competition, it appears that this mission is properly handled. . . .
>
> [Furthermore,] SOS should: (a) consider a realignment of its emphasis upon problem solving in its search for leadership, (b) investigate the possible use of the examples from reading materials of current business leaders as well as world and revolutionary leaders who obtain the following of their masses, (c) examine the possibility of greater focus upon the techniques of identifying leadership qualities.[144]

Commentators have no argument with SOS's objective of improving its students' leadership skills; rather, they simply question whether leadership can be taught at all and, if so, whether the sports field is the proper place to teach it.

Criticism of Criticisms

The task of AU's principal commentators—quantifying objectives for education and assessing AU's performance in that regard—is difficult because education is a field that is by nature subjective, often esoteric, and frequently only as good as the last observer's opinion. Nevertheless, their commentary—both favorable and unfavorable—was usually cogent and helped AU evaluate the performance of its schools.

Board of Visitors

Among the several groups studying AU and its schools, the Board of Visitors is probably the most important. Other study groups perform essentially ad hoc assessments, in that they are limited to the amount of information they can absorb within the time limits of a single conference. Although the depth and quality of its reports vary, the BOV has established a continuity of assessment over the life of the university. Board members typically serve for three years, their terms frequently overlapping those of predecessors and successors. Consequently, the board is in a unique position to advise on organizational difficulties, curriculum orientation, and specific school problems.[145]

During the first four decades of its existence, the board advised AU on such matters as facilities upgrades, accreditation, doctrinal development, faculty quality and composition, utility of correspondence courses, student evaluations, assignment and selection procedures, and so forth.[146] Much of its commentary, as we have seen, involved specific recommendations and criticism of the schools' performance. Not all comments, however, were negative. For example, the board endorsed the schools' use of seminars and their "systematic exercises in speaking and writing."[147]

The board also applauded each school's successes, praising AWC in particular during the early and mid-1950s as a good school with a good program that ensured high intellectual quality and honest study of controversial issues.[148] In 1954 the board praised AWC for its faculty and staff, student selection procedures, and mature approach to curriculum changes. During the same year, the BOV strongly endorsed AU's basic educational philosophy and the quality of thinkers it produced, especially those from the Air War College Post-Graduate Study Group.[149]

"Impressed by the general interest and enthusiasm of both staff members and students," the board also had praise for ACSC (which included SOC until 1955) during this period.[150] Although problems with faculty tenure and student quality persisted, stabilized three-year tours (by 1953) and attempts at selective

manning (1956–57) helped ensure effective education.[151] In 1958 the board lauded the "constant and striking improvement in the quality of the College's faculty, curricula, and student body in recent years."[152]

Despite Air Force efforts to exercise "continuous care that the selection of faculty and student personnel . . . is of the highest quality,"[153] problems in recruiting enough capable faculty members intensified after 1958.[154] Consequently, faculty prestige suffered well into the 1960s.[155] However, the board was still "greatly impressed with the quality of thinking and competence in expression of the students."[156] But not until 1967 did the board again rate the AWC faculty superior, and—even then—it encouraged the faculty to keep improving.[157]

Air Force Educational Requirements Board Task Group

In 1963 the Air Force Educational Requirements Board Task Group issued an articulate, comprehensive report on Air Force PME. Requested by the AU commander, the report did not please everyone in the AU community. Moreover, the report prompted an Air Staff-directed "correction," published as volume 1A on 20 December 1963.

In August 1963 Lt Gen Troup Miller, Jr., AU commander, who had been on General Fairchild's staff in 1946, forwarded to Headquarters USAF/AFPDP (Personnel) the corporate AU response to the report. In this letter the general noted two "major inadequacies," chief of which was the group's methodology. He charged that the group failed to use "detailed investigations in the field that the ERB [Educational Requirements Board] had utilized in its previous assignments." General Miller wanted to see thorough surveys of officers and supervisors in all services, studies of graduate requirements, assessments of officer performance, and determinations of the competency levels needed by faculty in various subjects. Instead, Miller noted that the group relied on "the best judgements of the individuals making the study [a process]

that has proved so inconclusive in the past. [Consequently] the foundation of our PME structure remains as open to question as it was before the ERB Report."[158]

The second inadequacy involved PME deficiencies cited by the report. General Miller argued that "many of these deficiencies are unsupported by evidence in the three volumes of the Report, and some are actually contradicted by evidence readily available elsewhere."[159] For instance, AU had not "felt a lack of Hq USAF guidance." Although the university received no official Air Force statements on the philosophy or objectives of PME, not to mention a definition of PME, this situation neither prevented AU from doing its job nor hindered higher headquarters' interest in things like school curricula.[160]

Because he thought the group's methodology and assessments were flawed, General Miller disagreed with the report's proposal to provide curriculum guidance and make radical changes in AU's PME structure.[161] Instead, AU felt that it had sufficient control over curricula to achieve its educational objectives.[162] General Miller's letter hastened to add, though, that AU "does not disagree with the objectives established by the ERB; it simply feels that their validity cannot be assured by the procedures followed."[163]

Despite his objections, General Miller agreed in principle with the report's proposal to define PME and establish objectives, as well as publish an Air Force manual on PME. Furthermore, his letter made clear that AU concurred with the report's assessment of faculty competence, student selection procedures, graduate assignments, extension courses, and the Air Force's long-term view of PME.[164]

Self-Development

Finally, some commentators had a persuasively optimistic view of the way AU conducted PME. For example, in his thesis on executive development in the Air Force, F. L. Giannarelli wrote in 1960 that

> the executive development program in the Air Force taken in its over-all composite is considered to be realistic. It has top management blessing, and the resources for achieving the objectives are generously provided. It is also concluded that the methods and procedures used are consistent with stated Air Force policies.[165]

Although Giannarelli acknowledged a problem in attracting "talented young men to make an officer career," he was convinced that the Air Force had an outstanding, modern, completely integrated officer education system "more extensive than for any comparable group of civilian executives." Indeed, he maintained that the Air Force system of PME was constrained only by the motivations of AU students. That is, the system provides the proper climate for individual development, but officers must "attend to [their] own self-development and actively plan . . . to avail [themselves] of every opportunity to increase . . . professional ability."[166] Despite criticisms of Air Force PME, the system has proven to be viable; therefore, it is up to each officer to take advantage of the opportunities that PME provides.

Notes

1. *Third Report of the Board of Visitors* (Maxwell Field, Ala.: Air University, 5 January 1948), 4, 22 (hereafter, BOV 3); see also BOV 1 (1946): 57–62.

2. Maj Gen Muir S. Fairchild, commandant, Army Air Forces School, to Maj Gen Orvil A. Anderson, commandant, Air War College, letter, subject: Air University Faculty, 13 February 1946, 2–3. Fairchild preferred "the model of the old Army War College" that used seminars and limited the number of lectures. "Utilizing this method," he wrote, "will permit the number of instructors permanently assigned to the Air War College to be held at a relatively low level" (page 2). Presumably by limiting the demands on the faculty, more top-quality instructors would be attracted to AU.

3. BOV 2 (1947): 29–30; BOV 3 (January 1948): 22.

4. BOV 1 (1946): 57–58. The board recommended a minimum tour of four years; good instructors could extend their tours for an additional year after spending one or two years back in operations. Furthermore, instructors were to be graduates of the schools where they taught. Eventually, the board members became adamant: failure to stabilize instructor tours threatened the long-range success of the Air Force. See BOV 5 (1949): 4–5.

5. BOV 7 (1951): 9; BOV 9 (1953): 7.
6. BOV 7 (1951): 12.
7. BOV 2 (1947): 29–30.
8. BOV 10 (1954): 6.
9. BOV 14 (1958): 4.
10. BOV 13 (1957): 5; BOV 15 (1959): 7.
11. BOV 15 (1959): 5, 7; BOV 16 (1960): 5–7.
12. Lt Gen Walter E. Todd, commander, Air University, to Air Force Combat Command Staff, Headquarters USAF, letter, subject: Sixteenth Report of the Board of Visitors, 20 June 1960, 6 (filed with BOV 16 [1960]).
13. BOV 3 (January 1948): 5. AU began fishing for formal accreditation in 1949–1950 but discarded the idea during the 1960s.
14. Col Ralph W. Keller et al., "Report of the Air University Committee on the Academic Levels of the Faculties of the Professional Military Schools" (Maxwell AFB, Ala.: Air University, 1 March 1963), 12–13 (AU Library call no. 358.0771 A298rc). Keller made a strong, eloquent appeal for enhancing the academic qualifications of the AU faculty, noting that even at Air Force Reserve Officer Training Corps almost all the faculty had college degrees. The report recommended the following distribution of degrees for AU faculty:

School	*Baccalaureates*	*Masters*	*Doctorates*
SOS	45%	45%	10%
ACSC	20%	45%	35%
AWC	—	20%	80%

15. BOV 3 (January 1948): 27.
16. BOV 19 (1963): 6; and Dr R. Gordon Hoxie, "Observations on the Education Programs of the United States Air Force," Paper for Air Force chief of staff, 2 July 1964, 12 (AU Library call no. M-43106-U). Rather than a comprehensive staff evaluation, Hoxie's study was one man's opinion and observation, based on briefings and conferences with senior officers at Headquarters USAF and Headquarters Air University.
17. BOV 6 (1950): 8–10. The boards recognized a distinction between area-specific instruction in a more procedural or rote sense, as opposed to teaching broader topics and allowing for reflective thinking. The first Board of Visitors noted that the distinction "implied that all [educational] courses will seek to develop in students the power to solve problems by well ordered, resourceful and original thought, rather than merely to train them in information and the routine performance of techniques." BOV 1 (1946): 48.
18. Air Force Educational Requirements Board, *Report on Professional Military Education*, vol. 1 (Maxwell AFB, Ala.: Air University, 10 July 1963), 2–4 (hereafter, task group report).
19. BOV 6 (1950): 4.

20. *A Report to the Commanding General, Air University, of an Educational Survey of the Air Command and Staff School* (Maxwell AFB, Ala.: Air University Human Resources Research Institute, 1 September 1949), 9–11 (hereafter, Orleans report).

21. *Report of the USAF Educational Requirements Conference* (Maxwell AFB, Ala.: Air University, 8 November 1956), 65.

22. Ibid., 5; see also Orleans report, 17ff.

23. Ralph W. Tyler, *Analysis of the Purpose, Pattern, Scope, and Structure of the Officer Education Program of Air University*, Project no. 505-040-0003 (Maxwell AFB, Ala.: Officer Education Research Laboratory, May 1955), 42–43.

24. Ibid., 4, 6.

25. Orleans report, 19.

26. BOV 3 (January 1948): 5; BOV 7 (1951): 11. See BOV 14 (1958): 4, for some key problems. The board recommended seminars of eight to 10 students. See also BOV 15 (1959): 3.

27. BOV 5 (1949): 24.

28. See BOV 3 (January 1948): 4–6; BOV 4 (June 1948): 6; and BOV 7 (1951): 8, 11.

29. The one exception was the 11th BOV (1955), which advised discontinuing the AWC correspondence course. However, the board changed its mind the following year. See BOV 11 (1955): 11, and BOV 12 (1956): 5; Orleans report, 16, 27.

30. BOV 15 (1959): 4–5.

31. BOV 2 (1947): 54.

32. BOV 1 (1946): 50.

33. Orleans report, 17ff.

34. BOV 7 (1951): 11.

35. BOV 19 (1963): 3.

36. BOV 8 (1952): 26.

37. BOV 18 (1962): 5–7.

38. BOV 19 (1963): 7–8; see also task group report, 2–4.

39. BOV 19 (1963): 7.

40. Orleans report, 20.

41. BOV 5 (1949): 7; BOV 6 (1950): 23. The board cited as examples the Army General Classification Test and the General Survey Test, which were already in use at ACSS.

42. BOV 1 (1946): 20.

43. Col Ralph W. Keller, Air Force deputy chief of staff for education, to Maj Gen Charles H. Pottenger, vice commander, Air University, attachment to letter, subject: Factors Involved in Determining the Appropriate Structure of the Professional Military Education System, 26 April 1963, 3–4.

44. Ibid., 4.

45. Ibid., tab A.

46. Ibid., 4.

47. Ibid.

48. *Report of the USAF Educational Conference, 17 November 1959* (Maxwell AFB, Ala.: Air University, December 1959), 7; see also task group report, 2-4 to 2-8. The 1958 Carmichael report reflected the same concern more directly. Although primarily interested in training programs involving missile weapons systems, the Carmichael board members trenchantly commented that the Air Force must reaffirm both student and permanent party manpower allocations for Air Force schools: "Education and training activities are of such importance to the future of the Air Force that any arbitrarily imposed manpower limitations or lack of support of approved courses on the part of major commands can have severe deleterious effects of a long-range nature." See Maj Gen Richard H. Carmichael, *Report of Education and Training Conference Maxwell Air Force Base, 21–23 May 1958* (Washington, D.C.: Department of the Air Force, 1 August 1958), 53–54. Similarly, six years later Dr Hoxie remarked that "the day to day urgencies of the other major commands have reduced the sense of importance of the Air University." Hoxie, 8.

49. *Report of Symposium on Long Range Air Force Qualitative Educational Requirements* (Washington, D.C.: Department of Health, Education, and Welfare, 17–18 October 1960), 7. This report contains an interesting description of how AU and the Air Staff determine Air Force educational requirements, as well as a summary of the functions and operation of AFERB. It also identifies 10 major career areas of particular interest to the Air Force: aerospace operations, administration (a broad potpourri of skills), security, intelligence, electronics, materiel (logistics), civil engineering, comptroller tasks, research, and weapons development (pages 5–8).

50. Ibid., 5.

51. BOV 2 (1947): 6.

52. BOV 4 (June 1948): 12.

53. BOV 19 (1963): 7.

54. Fairchild letter.

55. BOV 24 (1968): 8.

56. BOV 28 (1972): 2.

57. BOV 32 (1976): 5.

58. BOV 34 (1978): 4.

59. BOV 43 (1987): 3.

60. Office of Assistant Secretary of Defense for Manpower and Reserve Affairs, *Review of Faculty Mix at the U.S. Service Academies and the Senior and Intermediate Colleges* (Washington, D.C.: Government Printing Office, 16 March 1977), 32.

61. Amos A. Jordan and William J. Taylor, Jr., "The Military Man in Academia," *The Annals of the American Academy*, March 1973, 138–39.

62. Maureen Mylander, "Graduate School for the Generals," *Washington Monthly*, October 1974, 47–48.

63. DOD Committee on Excellence in Education, *The Senior Service Colleges: Conclusions and Initiatives* (Washington, D.C.: Government Printing Office, 5 June 1975), 7–11 (hereafter, Clements committee, SSC); idem, *The Intermediate Level Staff Colleges: Conclusions and Initiatives* (Washington, D.C.: Government Printing Office, 1 December 1976), 6–7 (hereafter, Clements committee, ILSC).

64. *Review of Faculty Mix*, 32, 38.

65. Lt Gen Raymond B. Furlong, commander, Air University, to Gen David C. Jones, chief of staff, US Air Force, letter, subject: AU Faculty, 17 June 1977, 1–2.

66. Memorandum, J. Michael Kelly, deputy assistant secretary of the Air Force for manpower, resources, and military personnel, to secretary of the Air Force [Verne Orr], subject: Officer Professional Military Education Faculty, 17 October 1984, 1–2.

67. Theodore J. Crackel, "On the Making of Lieutenants and Colonels," *Public Interest*, Summer 1984, 29–30.

68. Air University Task Force and Blue Ribbon Committee on Air University Faculty Improvement, *PME Faculty Enhancement: Combined Report* (Maxwell AFB, Ala.: Air University, February–March 1985), 1.

69. Ibid., 3, 7.

70. Ibid., 16.

71. *Officer PME Study* (Maxwell AFB, Ala.: Air University, February 1980), 16.

72. Frederick H. Hartmann, "The War Colleges in Perspective," in *The System for Educating Military Officers in the U.S.*, ed. Lawrence J. Korb, International Studies Occasional Paper no. 9 (Pittsburgh, Pa.: International Studies Association, 1976), 131.

73. BOV 36 (1980): 3. Possibly, the BOV was unable to agree on an optimal approach and merely chose to endorse the existing AWC curriculum.

74. Hartmann, 131.

75. Quoted in Brooke Nihart, "Intellectual Wasteland . . . or Challenge?" *Armed Forces Journal*, March 1973, 26.

76. Lt Comdr John E. Jackson, "Naval War College: The Right Stuff?" US Naval Institute *Proceedings*, April 1983, 72–73.

77. Maj Robert A. Doughty, "The Command and General Staff College in Transition, 1946–1976," Study Project (Fort Leavenworth, Kans.: Army Command and General Staff College, 11 June 1976), 127.

78. Maj Gen Franklin M. Davis, Jr., "The Dilemma of the Senior Service Colleges—A Commentary," in Korb, 110–11.

79. Doughty, 129.

80. Kenneth J. Groves, "Air University and the Professional Education System," *Air University Review* 26, no. 5 (July–August 1975): 14.

81. Maj Gen Lawrence S. Lightner, *Review of Air War College and Air Command and Staff College* (Maxwell AFB, Ala.: Air University, March 1973), 57 (hereafter, Lightner board).

82. Ibid., 64–65.

83. Air University Director of Education, *AU/ED Orientation Program for AU/CC* (Maxwell AFB, Ala.: Air University, June 1979), 5.

84. Clements committee, SSC, 6. Writing about the staff colleges, "the Committee was most impressed by those elective programs which supported student officer specialities, and were oriented distinctly toward mission-specific subjects." Clements committee, ILSC, 9.

85. Clements committee, SSC, 16. Regarding cooperative degree programs at the staff colleges, "the Committee desires that students attending the Staff Colleges only participate in cooperative degree programs that appropriately support officer career specialties, and/or subspecialties, with emphasis on shortage disciplines within the Services." Clements committee, ILSC, 12.

86. *Officer PME Study*, atch 1, *Supporting Documents* (Maxwell AFB, Ala.: Air University, February 1980), 14-5.

87. Mylander, 45–48.

88. Edward L. Katzenbach, Jr., "The Demotion of Professionalism at the War Colleges," US Naval Institute *Proceedings*, March 1965, 36.

89. Williamson Murray, "Grading the War Colleges," *National Interest*, Winter 1986–1987, 13.

90. Lt Gen R. G. Gard, Jr., president, National Defense University, to the commandants of the National War College and the Industrial College of the Armed Forces, letter, subject: Curriculum Development, Academic Year 1977–1978, 7 February 1987, 2.

91. Air University Deputy Chief of Staff for Education, *Report of the Air University Ad Hoc Committee on Cost Reduction in Professional Military Education* (Maxwell AFB, Ala.: Air University, January 1971), 6.

92. Ibid., 5–6, J-6.

93. BOV 30 (1974): 2.

94. BOV 32 (1976): 5.

95. Katzenbach, 38.

96. Murray, 13–14.

97. John M. Collins, *U.S. Defense Planning: A Critique* (Boulder, Colo.: Westview Press, 1982), 136, 139–42.

98. Rear Adm Henry E. Eccles, "Military Theory and Education; The Need for and Nature Of," *Naval War College Review*, February 1969, 74, 78.

99. Murray, 13.

100. Nihart, 26.

101. Richard Megaree, "History and Military Education," *Naval War College Review*, September 1978, 9–13.

102. Lightner board, 12, 32.

103. Lt Gen William R. Richardson, "The Leavenworth Influence on Today's Army," *Military Review*, May 1981, 17–20.

104. John McCaughey, "The Modern Major General: In Search of a Role Model," *Defense Week*, 23 June 1980, 7–8.

105. Donald F. Bletz, "The Modern Major General," in Korb, 12.

106. McCaughey, 8.

107. Quoted in ibid., 6.

108. Ibid., 7.

109. Maj Gen Robert N. Ginsburgh, director of information, US Air Force, to Gen George S. Brown, chief of staff, US Air Force, letter, subject: PME Courses, 10 December 1973.

110. Lt Gen F. Michael Rogers, commander, Air University, to Gen George S. Brown, chief of staff, US Air Force, letter, subject: PME Courses, 30 January 1974, 1.

111. Lt Gen Raymond B. Furlong, commander, Air University, to Air University addressees, letter, subject: Improving the Quality of PME (AWC/ACSC), 15 October 1975.

112. Ibid., 4.

113. Clements committee, SSC, 5–6. Although the committee was not so specific with regard to the staff colleges, it did note that ACSC "should take immediate steps to increase the proportion of its curriculum devoted to air warfare." Clements committee, ILSC, 10.

114. Lt Gen Raymond B. Furlong, briefing, Corona West, 6 October 1976, 6.

115. BOV 34 (1978): 4.

116. Air University Deputy Chief of Staff for Education, *Staff Review of the Report of Task Study Group Alpha* (Maxwell AFB, Ala.: Air University, 30 August 1974), 10.

117. BOV 31 (1975): 12–13.

118. Katzenbach, 39–40.

119. *Staff Review*, 20.

120. Ibid., 22–23.

121. Memorandum, Vice Adm Patrick J. Hannifin, director, Joint Staff, to the secretary of defense [Harold Brown], subject: Professional Development Education, 3 April 1978, appendix B, 21.

122. *Officer PME Study*, 114–15.

123. BOV 43 (1987): 6.

124. Minutes of the Air Force Vice Commanders PME Conference, 14–15 June 1980, 14-3.

125. BOV 37 (1981): 10.

126. BOV 41 (1985): 17; see also Maj Henry L. Lavender, "A Case for Expanding the United States Air Force Officer Professional Military Education System through Correspondence Instruction," Research Study (Maxwell AFB,

Ala.: Air Command and Staff College, April 1977), 57–73. The report includes a proposed nine-year PME correspondence program.

127. Lightner board, 20.

128. Ibid., 56.

129. BOV 32 (1976): 5.

130. BOV 39 (1983): 2.

131. Fairchild letter, 1.

132. BOV 32 (1976): 5.

133. Eccles, 78.

134. BOV 39 (1983): 11–12.

135. Murray, 13, 16, 18–19.

136. Lightner board, 19.

137. Clements committee, SSC, 11–12.

138. Lightner board, 65.

139. BOV 37 (1981): 4.

140. BOV 27 (1971): 5.

141. BOV 34 (1978): 11, 13–14.

142. Vice Commanders PME Conference, 14-3; *Officer PME Study*, 80–86.

143. BOV 36 (1980): 26–27.

144. BOV 42 (1986): 11, 13.

145. See, for example, George N. Dubina, *Air University Board of Visitors: A Brief Analytical History, 1946–1968*, Air University Historical Division Study Series, no. 28 (Maxwell AFB, Ala.: Air University, December 1968), 25.

146. Ibid., 7–12. These pages summarize the recommendations for the period 1946–1968.

147. BOV 3 (January 1948): 23.

148. Ibid., 27; BOV 6 (1950): 8–10; BOV 9 (1953): 9.

149. BOV 10 (1954): 2–4. The Post-Graduate Study Group included a small number of exceptional AWC graduates who remained at AU for an additional two-year tour to conduct doctrinal studies. The group began work on 21 July 1952 under the direction of Dr Eugene M. Emme, but—despite encouragement from the BOV to continue—it disbanded in 1954. The group's functions were transferred to the AWC Evaluation Staff and the AWC Studies Group, the latter primarily responsible for publishing the best AWC research efforts. See Robert Frank Futrell, *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907–1964* (Maxwell AFB, Ala.: Air University, 1971), 200–201.

150. BOV 8 (1952): 8.

151. BOV 9 (1953): 7; BOV 13 (1957): 5.

152. BOV 14 (1958): 6.

153. BOV 13 (1957): 4.

154. Regarding AWC, see BOV 12 (1956): 4–5, and BOV 14 (1958): 4; regarding ACSS, see BOV 16 (1960): 6–7.

155. BOV 15 (1959): 7; BOV 19 (1963): 6.

156. BOV 16 (1960): 4.

157. BOV 23 (1967): 5–6.

158. Lt Gen Troup Miller, Jr., commander, Air University, to Headquarters USAF/AFPDP, letter, subject: Report of the Educational Requirements Board on Professional Military Education, 30 August 1963, atch, 2. The attachment is entitled "Air University Position [on] Report of the Educational Requirements Board on Professional Military Education." This attachment, too, has a separate attachment.

159. Ibid.

160. Ibid., 1.

161. Ibid., 4–8, 15. The report proposed a two-school system that retained SOS and combined AWC and ACSC. Joint service schools would provide senior education. The report of the task group shows three Air Force PME levels as part of the proposed "Ultimate Professional Military Education System." General Miller complained about the original report's proposal of two levels supported by correspondence courses. At Air Staff behest, the report added a third level. Task group report, vol. 1A:12.

162. Miller letter, atch to atch, 4.

163. Miller letter, atch, 15.

164. Ibid., 3, 8–9, 14–15; Miller letter, atch to atch, 1–4.

165. Flourenz Lenin Giannarelli, "An Analysis of Executive Development in the United States Air Force" (Master's thesis, Ohio State University, 1960), 110.

166. Ibid., 111–13, 115. Note that Giannarelli's view was not generally shared by other commentators.

Chapter 4

Reflections on Professional Military Education for Air Force Officers

> Theory exists . . . to educate the mind of the future commander, or, more accurately, to guide him in his self-education . . . to provide a thinking man with a frame of reference for the movements he has been trained to carry out.
>
> —Carl von Clausewitz

The authors have reserved this final chapter to reflect on the evidence presented in the preceding chapters. We offer our views in the spirit of improving the Air Force system of professional military education for officers.

Professional Military Education and Its Environment

Since 1946 Air Force PME programs have sought to provide the education necessary to help produce an officer corps capable of devising sound, creative solutions to military problems. To some degree, this effort has succeeded. However, the evidence reviewed here indicates that much of the thinking on classic military subjects such as strategy and operational art has long since been abdicated to various civilian institutions.[1] The paucity of writings from Air Force authors in these areas suggests that many officers may lack an appreciation and understanding of the art of war. Because of the United States' position as the world's predominant economic and military power, this lapse has been affordable. Until now, we have relied on superior equipment and technical skill to deter or

overwhelm adversaries. Today, however, the situation is changing. The dynamic world environment, as well as diminished resources, requires that we *outthink* our opponents.

The United States no longer has a clear economic and military advantage over its allies, friends, and potential enemies.[2] Modern world complexities demand that we produce senior military leadership capable of clearly perceiving the realities of political-military affairs. This leadership should also be able to articulate ideas that are both visionary and compelling—visionary in the sense of being able to anticipate problems and recognize circumstances, and compelling in the sense of being able to make people understand the needs of the modern military. Presently, Air Force PME schools insist that their programs develop these abilities. Certainly, the schools' curricula have moved in the right direction, especially in recent years. But the episodic nature of the current system, coupled with heavy demands on Air Force people for currency and competency in specialized duties, limits the ability and motivation of officers to participate in PME. Consequently, the development of their professional knowledge and their judgment of the art of war both suffer.

Professional Military Education's Foundation: Defining the Officer Corps

PME for Air Force officers should not be an end in itself. Rather, it should be a means to cultivate the skills and potential of the officer corps, develop senior leadership, and enhance the Air Force contribution to national defense. Thus, what PME aims to do and how it aims to do it depend on an understanding of the Air Force's expectations of its officers. Unfortunately, no adequate definition of the Air Force officer exists, notwithstanding the attempts of various regulations. Consequently, we have no viable foundation for devising an effective PME program. Perhaps, writing *the* definition of an Air Force officer is unrealistic. Today's complex world may demand several definitions, each specifying different levels of education and experience. Ideally, officers begin their

careers by specializing and becoming proficient in assigned career fields. This is the province of specialized education. As they advance in grade, however, officers not only must become more proficient in their specialties, but also must gain a deeper and broader understanding of how and why (and when) our instruments of military power are to be employed. This is the province of PME. Any definition of an Air Force officer, therefore, should convey a sense of both particularity and expansiveness.

In the past, major decisions about PME were not always based upon a cogent, reasoned assessment of Air Force needs. Should the Air Force stress education that is broad and comprehensive or specialized and procedural? Does the Air Force want—or need—officers who are conversant in broad issues of national security or those who confine themselves to purely "military" (and frequently only technical) issues? No crisis has yet demanded complete answers to these questions. Thoughtful officers and civilian observers have voiced their ideas and concerns. But there has been no significant institutional attempt (with the possible exception of that of the Educational Requirements Board Task Group of 1962–63) to approach PME systematically and comprehensively. For the most part, the numerous boards and studies have succeeded only in asking similar questions—and making similar recommendations—over and over again.

Despite the absence of workable definitions or a useful philosophy of education, the Air Force and AU have been able to formulate general goals for PME: to prepare officers for future responsibilities by teaching them to think creatively and express themselves clearly; to lead effectively; to solve military problems; to prepare military plans and studies; to develop qualities of loyalty, integrity, courage, and sacrifice; and to achieve national goals through an increased understanding of war, military forces, national security, and international relations. These are noble intentions and are generally representative of Air Force objectives. But the operational imperative of maintaining a high state of combat readiness and the management drive for efficient use of resources have interfered with their full realization. Consequently, the Air Force sometimes appears to subordinate the value of a

broad military education to the more immediate and easily measured benefits of a narrow technical education.

Professional Military Education Successes and Failures

PME should help officers become good leaders—and followers—in a changing politico-economic-military environment. As professionals, Air Force officers need to understand the art of war and be able to apply what they know. The most common complaint of the last 40 years' worth of PME studies addressed the system's failure to produce officers with a deep understanding of their profession. Inculcating this knowledge should be a primary task of PME. With it, officers can progress to higher levels of application, analysis, and synthesis. Without it, they can master factual material but still be poorly prepared for the challenges of senior leadership.

Although both AWC and ACSC nominally adhere to stated goals, the system in practice demands a relatively low level of intellectual achievement from students. The resident curricula start at square one, teaching basic concepts. Although the curricula may be demanding, students assimilate large amounts of diverse information rather than develop critical analytical skills. Because the schools require no common standard of knowledge of their entering students, the curricula necessarily include much introductory material. Unfortunately, this approach leaves little time for in-depth study and the development of higher intellectual ability. The fact that the program is not particularly challenging may account for many officers' belief that the chief value of PME is to enhance promotability rather than build professional competence and understanding.

The Air Force has produced a number of skilled, articulate leaders during its existence as a separate military service. But a close study of the history of Air Force education does not support the proposition that PME is responsible for this achievement. Granted, Air Force PME exposes officers to a wide variety of

information; in some cases it may even motivate officers to study the military profession in depth. However, the evidence suggests that such studies depend more upon self-discipline and determination than the contribution of formal PME programs. The curricula simply do not require officers to think deeply and critically about issues affecting their profession. PME institutions have not developed a reputation as hotbeds of new ideas. On the contrary, critics regard them as defenders of the status quo or bastions of esoteric theory having little relevance to the "real" world of military operations. The schools devote scant attention to the art of war, although, in fairness, we must note that Air University recognizes this deficiency and is trying to correct it.

Because of the changing national and international environment, AU must be more responsive to constructive criticism that addresses several major areas, chief among them the adequacy of AWC and ACSC faculties. (The SOS faculty is generally considered adequate to meet that school's goals and objectives.) Most faculty members have been recent graduates of the schools—thus they are peers of their students—have little teaching experience, and serve for only a few years. Consequently, they are unlikely to have the academic credentials, subject-matter expertise, or instructional skills necessary to be effective in the classroom. Civilian universities allow graduate students to teach, but they do not permit them to dominate the educational process. As we have seen, critics blame AU's faculty for the schools' passive educational methods and the neglect of more effective learning techniques. Although AU has attempted to upgrade its faculty by employing civilians and retired officers, the Air Force career system has thus far inhibited significant improvement. The relatively poor promotion statistics for the AU faculty, although they certainly aggravate the problem, are symptomatic rather than causative.

Critics also target AU's procedures for selecting students to attend the intermediate and senior PME schools in residence. Selection—ultimately, designation—to attend is based on the criteria of promotion and nomination boards—that is, on performance-oriented evaluations of the officers' potential to serve

successfully in higher ranks. This means of selection is logical and defensible, but it does not assure a common base of knowledge on the part of the entering students. The various officer specialties, commissioning sources, and duty experiences of officers all require varying levels of knowledge. Thus, AU's curricula accommodate this diversity with breadth rather than depth. Because nonresident PME courses are facsimiles of the resident courses, they do not contribute to building a common foundation which would permit the resident curricula to begin with more intellectually demanding studies. Therefore, if the intermediate and senior schools are to have advanced, graduate-level curricula, AU must find a way to ensure that entering students are adequately prepared for a more rigorous program.

Recommendations

We have said that many officers perceive PME as a means to promotion rather than a way to enhance professional competence—witness the high number of officers who formerly enrolled in nonresident PME courses well before they needed to and the corresponding surge of course completions prior to promotion boards. (Recent policy changes no longer allow early nonresident enrollment.) The perception remains that selection for intermediate or senior schools is good but that actual attendance confers no particular benefit. Real changes must go further than simply making curricula more rigorous and relevant. The Air Force should revamp its policies for officer evaluation, promotion, and assignment. In short, it must reassess its valuation of PME. But before such changes can occur, we need to specify the objectives of the PME system as they apply at each level of an officer's career.

Quality education is not a quick fix; it requires long-term investment. Thus, three principles apply: First, education should be open-ended rather than short-term, recurring, and constrained by resident or nonresident courses (however good they may be). Second, PME must prepare officers for each phase of their careers and match their current level of professional development. Third,

the system should recognize that not everyone has the same interest in or capacity for senior leadership. The Air Force may need 100,000 officers; it does not need, nor can it provide the system to educate, that same number of potential chiefs of staff. But it does need to educate all officers to a level consistent with their career goals, achievements, and abilities.

PME cannot, and should not, compete with the education that prepares officers for their areas of specialization. PME's mission and focus are broader. Although Air Force officers should know their specialty thoroughly, they should also know the basics: the workings of the several parts of the Air Force, the history of air power and its contribution to the art of war, and the role of the Air Force and its sister services in providing national military power. Furthermore, officers should constantly expand their general knowledge of military strategy, doctrine, and force employment. They must develop the ability to think critically about these topics. Further, they should be able to anticipate the problems of their profession and then solve them. Ideally, PME should develop these abilities.

We should not think of PME as an arbitrary requirement to be completed and checked off in our records. True professional education requires a career-long commitment to learning. In the past we have measured officers' career potential based upon their accomplishments. In the future we need to temper this traditional view by paying more attention to intellectual ability. We should not wait until officers are obviously destined for eagles or stars before we prompt them to study the profession of arms. More importantly, officers should not participate in PME solely in anticipation of being colonels and generals, and especially not as a means of being promoted. Other reasons are more immediate and legitimate than those. Throughout their careers, officers can profit from understanding their profession and from thinking critically. Rather than instruct officers to become specialists, professional military education should address the matter of *why* various specialties are important.

Thus, the Air Force has a responsibility to make PME just as important to officers as their areas of specialization. Toward that

end, the Air Force should use the nonresident PME system to teach the basic subjects that would be required for admission to the resident schools. Rather than merely copy the resident curricula, the nonresident program might present a series of independent but related instructional modules phased to particular career levels. Moreover, these modules would be flexible enough to allow officers to keep working at their Air Force jobs. Even if these officers never attend a resident school, this baseline knowledge would not be wasted. It would be useful, indeed essential, in helping them fulfill their responsibility to understand the environment in which they presently live and one day may fight. After basic instruction becomes the province of the nonresident program, the resident schools could concentrate on refining an officer's ability to synthesize and articulate ideas. SOS, for example, would still teach officership and leadership but also could offer an introduction to critical thinking. Because ACSC and AWC must instruct officers in the application of air power in the modern world, their curricula should be structured accordingly. However, the course of study should not neglect the full spectrum of military activities, including the essential roles of naval and ground forces. Furthermore, as in SOS, the schools' teaching methods should challenge and develop their students' ability to think critically.

Finally, the Air Force needs broad, comprehensive education as well as specialized education. Not every second lieutenant becomes chief of staff; not every rated officer commands a flying wing. Each kind of education can produce effective leaders, but the ultimate aim of professional military education must be to encourage and nurture those officers who can absorb and master the art of war in its broadest sense. Not everyone has this ambition, nor should the Air Force expect them to. In the interests of national security, however, the Air Force's future senior leadership must come from its PME graduates.

Conclusion

For the past 40 years, officer PME has done what the Air Force asked it to do. The future Air Force will be even more demanding, however. Whereas past changes to the PME system have been minor, the current world situation suggests a need for major alterations in the way we think of and prepare for war—in realms as seemingly diverse as space operations and low-intensity conflict. We simply cannot afford the luxury of intellectual complacency. As General Fairchild said on the day that Air University opened for business, "This is not a post-war school system—it is a pre-war school system!" His words are as relevant now as they were then.

Education is too crucial to be neglected. The Air Force must rethink its PME system and foster an environment that provides for career-long educational opportunities. But the Air Force and Air University cannot and should not do it all. Our baseline assumption is that as Air Force officers, each of us must recognize the intrinsic value of knowing more than just the specialized, technical task we are assigned. Once we accept the truth of that injunction, we can legitimately call ourselves military professionals.

Notes

1. See Richard D. Besley, *The Need for Military Officers as Strategic Thinkers* (Maxwell AFB, Ala.: Air University, April 1972), 9–24; and Col Robert E. Huyser, "Strategy for the Nuclear Forces of the United States," Thesis no. 2276 (Maxwell AFB, Ala.: Air War College, April 1963), 11.

2. See, for example, Commission on Integrated Long-Term Strategy, *Discriminate Deterrence: Report of the Commission on Integrated Long-Term Strategy* (Washington, D.C.: Government Printing Office, January 1988), 9, 12–18.

Bibliography

Articles and Books*

Ball, Col Harry P. *Of Responsible Command.* Dallas: Taylor Publishing Co., 1984.

Barnard, Henry. *Military Schools and Courses of Instruction in the Science and Art of War.* 1872. Reprint. New York: Greenwood Press, 1969.

Besley, Richard D. *The Need for Military Officers as Strategic Thinkers.* Maxwell AFB, Ala.: Air University, April 1972.

Bletz, Donald F. "The Modern Major General." In *The System for Educating Military Officers in the U.S.*, edited by Lawrence J. Korb, 1–15. International Studies Occasional Paper no. 9. Pittsburgh, Pa.: International Studies Association, 1976.

Buell, Comdr Thomas B. "The Education of a Warrior." US Naval Institute *Proceedings*, January 1981, 41–45.

Clausewitz, Carl von. *On War.* Edited and translated by Michael Howard and Peter Paret. Princeton, N.J.: Princeton University Press, 1984.

Collins, John M. "How Military Strategists Should Study History." *Military Review*, August 1983, 31–44.

_____. *U.S. Defense Planning: A Critique.* Boulder, Colo.: Westview Press, 1982.

Crackel, Theodore J. "On the Making of Lieutenants and Colonels." *Public Interest*, Summer 1984, 18–30.

Crowl, Philip A. "Education versus Training at the Naval War College: 1884–1972." *Naval War College Review*, November–December 1973, 2–10.

Dastrup, Boyd L. *The US Army Command and General Staff College: A Centennial History.* Manhattan, Kans.: Sunflower University Press, 1982.

Davis, Maj Gen Franklin M., Jr. "The Dilemma of the Senior Service Colleges—A Commentary." In *The System for Educating Military Officers in the U.S.*, edited by Lawrence J. Korb, 107–15. International Studies Occasional Paper no. 9. Pittsburgh, Pa.: International Studies Association, 1976.

*Note the following annotations: (1) AU/ED no. 25A—found in Headquarters Air University/Directorate of Operations and Plans Administration, file no. 25A, Educational Source Documents; (2) AUCADRE/RI no. 22K—found in Air University Center for Aerospace Doctrine, Research, and Education/Airpower Research Institute administration file no. 22K, Professional Military Education; and (3) M—found in the Air University Library, document section. Items not annotated are available either in the AU Library or the United States Air Force Historical Research Center at Maxwell AFB, Alabama.

Eccles, Rear Adm Henry E. "Military Theory and Education; The Need for and Nature Of." *Naval War College Review*, February 1969, 70–79.

Emerson, Lt Col Russel A. "It's Academic! C&SC: Prospectus for the 1980s." *Marine Corps Gazette*, August 1982, 62–67.

Futrell, Robert F. *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907–1960.* Vol. 1. Maxwell AFB, Ala.: Air University, December 1989.

_____. *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907–1964.* Maxwell AFB, Ala.: Air University, 1971.

Groves, Kenneth J. "Air University and the Professional Education System." *Air University Review* 26, no. 5 (July–August 1975): 10–28.

Hartmann, Frederick H. "The Naval War College in Transition, 1965–1984." *Naval War College Review*, September–October 1984, 6–20.

_____. "The War Colleges in Perspective." In *The System for Educating Military Officers in the U.S.*, edited by Lawrence J. Korb, 129–32. International Studies Occasional Paper no. 9. Pittsburgh, Pa.: International Studies Association, 1976.

Hattendorf, John B., Mitchell B. Simpson III, and John R. Wadleigh. *Sailors and Scholars.* Newport, R.I.: Naval War College Press, 1984.

Jackson, Lt Comdr John E. "Naval War College: The Right Stuff?" US Naval Institute *Proceedings*, April 1983, 71–77.

Janowitz, Morris. *The New Military.* New York: Russell Sage Foundation, 1964.

_____. *The Professional Soldier.* New York: Free Press, 1960.

_____, and Stephen Westbrook, eds. *The Political Education of Soldiers.* Beverly Hills, Calif.: Sage Publications, 1983.

Jordan, Amos A., and William J. Taylor, Jr. "The Military Man in Academia." *The Annals of the American Academy*, March 1973, 129–48.

Katzenbach, Edward L., Jr. "The Demotion of Professionalism at the War Colleges." US Naval Institute *Proceedings*, March 1965, 34–41.

Kirkpatrick, Lyman B., Jr. "The War Colleges: Education for What?" In *The System for Educating Military Officers in the U.S.*, edited by Lawrence J. Korb, 117–28. International Studies Occasional Paper no. 9. Pittsburgh, Pa.: International Studies Association, 1976.

Margiotta, Franklin D., and Michael Maccoby. "Future Challenges to Military Leadership: Adjusting to the Human Implications of Advanced Technology." In *Technology, Strategy, and National Security*, edited by Franklin D. Margiotta and Ralph Sanders, 77–103. Washington, D.C.: National Defense University Press, 1985.

Masland, John W., and Laurence I. Rodway. *Soldiers and Scholars.* Princeton, N.J.: Princeton University Press, 1957.

McCaughey, John. "The Modern Major General: In Search of a Role Model." *Defense Week*, 23 June 1980, 6–8.

Megaree, Richard. "History and Military Education." *Naval War College Review*, September 1978, 3–15.

Murray, Williamson. "Grading the War Colleges." *National Interest*, Winter 1986–1987, 12–19.

Mylander, Maureen. "Graduate School for the Generals." *Washington Monthly*, October 1974, 42–52.

Nihart, Brooke. "Intellectual Wasteland . . . or Challenge?" *Armed Forces Journal*, March 1973, 26–32.

Oldenburg, Don. "Managers or Leaders? Catch 22 in Our Officer Corps." *The American Legion*, July 1987, 24–25.

Possony, Stefan T., and J. E. Pournelle. *The Strategy of Technology: Winning the Decisive War*. Cambridge, Mass.: Dunellen, 1970.

Quigley, Carroll. *The Evolution of Civilizations*. Indianapolis: Liberty Press, 1961.

Ralph, Brig Gen John E. "Professional Identity in a Plural World: The Focus of Junior Officer Education in the United States Air Force." In *The System for Educating Military Officers in the U.S.*, edited by Lawrence J. Korb, 95–106. International Studies Occasional Paper no. 9. Pittsburgh, Pa.: International Studies Association, 1976.

Record, Jeffrey. "The Fortunes of War." *Harper's*, April 1980, 19–23.

Reeves, Capt Ira L. *Military Education in the United States*. Burlington, Vt.: Free Press Printing Co., 1914.

Richardson, Lt Gen William R. "The Leavenworth Influence on Today's Army." *Military Review*, May 1981, 16–23.

_____. "Officer Training and Education." *Military Review*, October 1984, 23–34.

Ritchey, Col Russell V. *Years of the Tiger*. Edited by Maj Rolland F. Clarkson, Maj Joel W. Sills, and Capt Martin J. Costellic. Maxwell AFB, Ala.: Squadron Officer School, June 1974.

Rogers, Lt Gen F. Michael. "Why Professional Military Education?" *Air University Review* 26, no. 5 (July–August 1975): 2–9.

Schratz, Paul R. "The Hundred Year Growing Pain: Opposition and Opportunity." *Naval War College Review*, September–October 1984, 71–85.

Shelburne, James C., and Kenneth J. Groves. *Education in the Armed Forces*. New York: Center for Applied Research in Education, 1965.

Whilley, Alvin D. *To Labor As One*. Washington, D.C.: National Defense University Press, 1981.

Yoffe, Emily. "The Chosen Few." *Washington Post Magazine*, 4 November 1984, 8–9, 16–18, 21.

Reports and Studies

Air Force Educational Requirements Board. *Report on Professional Military Education*. 3 vols. Maxwell AFB, Ala.: Air University, 10 July 1963. AU/ED no. 25A-57.

_____. *Report on Professional Military Education*. Addendum. Maxwell AFB, Ala.: Air University, 20 December 1963. AU/ED no. 25A-57.

Air University Board of Visitors. *Reports*. 43 vols. Maxwell AFB, Ala.: Air University, 1946–1987.

Air University Deputy Chief of Staff for Education. *Report of the Air University Ad Hoc Committee on Cost Reduction in Professional Military Education*. Maxwell AFB, Ala.: Air University, January 1971. AU/ED no. 25A-101.

_____. *Staff Review of the Report of Task Study Group Alpha*. Maxwell AFB, Ala.: Air University, 30 August 1974. AU/ED no. 25A-125.

Air University Task Force and Blue Ribbon Committee on Air University Faculty Improvement. *PME Faculty Enhancement: Combined Report*. Maxwell AFB, Ala.: Air University, February–March 1985. AU/ED no. 25A-207.

Armed Forces Staff College. *Class 82 Student Body Analysis Final*. Norfolk, Va.: Armed Forces Staff College, 8 January 1988. AUCADRE/RI no. 22K.

Bangs, Maj Daniel P. "A Survey of Studies on Factors Affecting Air Force Professional Military Education." Report no. 86-0190. Maxwell AFB, Ala.: Air Command and Staff College, 1986.

Carmichael, Maj Gen Richard H. *Report of Education and Training Conference, Maxwell Air Force Base, 21–23 May 1958*. Washington, D.C.: Department of the Air Force, 1 August 1958. AU/ED no. 25A-23.

Caudill, Lt Col James E., et al. "An Examination of the Air Force Professional Military Education System." Research Report. Maxwell AFB, Ala.: Air War College, April 1974. M-32983 C3712e.

Commission on Integrated Long-Term Strategy. *Discriminate Deterrence: Report of the Commission on Integrated Long-Term Strategy*. Washington, D.C.: Government Printing Office, January 1988.

DOD Committee on Excellence in Education. *The Intermediate Level Staff Colleges: Conclusions and Initiatives*. Washington, D.C.: Government Printing Office, 1 December 1976. M-42215-21c.

_____. *The Senior Service Colleges: Conclusions and Initiatives*. Washington, D.C.: Government Printing Office, 5 June 1975. M-42215-21.

Dorger, Maj John M. *USAF Officer PME in the 1980s: A Look at the Air Force Need for Professional Military Education in the Coming Decade*. Research Study. Maxwell AFB, Ala.: Air Command and Staff College, May 1979. M-43122 D695u.

Doughty, Maj Robert A. "The Command and General Staff College in Transition, 1946–1976." Study Project. Fort Leavenworth, Kans.: Army Command and General Staff College, 11 June 1976. M-42022-5 D732c.

Dubina, George N. *Air University Board of Visitors: A Brief Analytical History, 1946–1968*. Air University Historical Division Study Series, no. 28. Maxwell AFB, Ala.: Air University, December 1968.

_____. *Dedication and Significant Events, 1946–1971*. Air University Historical Division Study Series, no. 36. Maxwell AFB, Ala.: Air University, December 1971. AUCADRE/RI no. 22K.

Giannarelli, Flourenz Lenin. "An Analysis of Executive Development in the United States Air Force." Master's thesis, Ohio State University, 1960.

Heck, Frederick B. "Career Development of Air Force Officers." Master's thesis, University of Pittsburgh, 1954. 358.4 H448c.

Hoxie, Dr R. Gordon. "Observations on the Education Programs of the United States Air Force." Paper for Air Force chief of staff, 2 July 1964. AUCADRE/RI no. 22K and M-43106-U.

Huyser, Col Robert E. "Strategy for the Nuclear Forces of the United States." Thesis no. 2276. Maxwell AFB, Ala.: Air War College, April 1963.

Keller, Col Ralph W., et al. "Report of the Air University Committee on the Academic Levels of the Faculties of the Professional Military Schools." Maxwell AFB, Ala.: Air University, 1 March 1963. AU Library call no. 358.0771 A29rc.

Kidd, Maj Gen John B. *Officer Advanced Degree and Professional Military Education Requirements.* Washington, D.C.: Department of the Air Force, 3 June 1971. AU/ED no. 25A-168(4).

Lavender, Maj Henry L. "A Case for Expanding the United States Air Force Officer Professional Military Education System through Correspondence Instruction." Research Study. Maxwell AFB, Ala.: Air Command and Staff College, April 1977. M-43122 L399c.

Lightner, Maj Gen Lawrence S. *Review of Air War College and Air Command and Staff College.* Maxwell AFB, Ala.: Air University, March 1973. AU/ED no. 25A-113 and M-42252-11.

Office of Assistant Secretary of Defense for Manpower. *Officer Education Study.* 3 vols. Washington, D.C.: Department of Defense, July 1966.

Office of Assistant Secretary of Defense for Manpower and Reserve Affairs. *Review of Faculty Mix at the U.S. Service Academies and the Senior and Intermediate Colleges.* Washington, D.C.: Government Printing Office, 16 March 1977. AU/ED no. 25A-161.

Officer PME Study. Maxwell AFB, Ala.: Air University, February 1980. AU/ED no. 25A-186a.

_____. Attachment 1, *Supporting Documents.* Maxwell AFB, Ala.: Air University, February 1980. AU/ED no. 25A-186a.

Pittman, Col Wayne C., Jr. *Why PME? The Purpose of Professional Military Education.* Research Report. Maxwell AFB, Ala.: Air War College, April 1980. M-43117 P689w.

Report of the Army Air Forces Educational Conference. Maxwell Field, Ala.: Army Air Forces School, 18–20 February 1946.

A Report to the Commanding General, Air University, of an Educational Survey of the Air Command and Staff School. Maxwell AFB, Ala.: Air University Human Resources Research Institute, 1 September 1949. AU/ED no. 25A-11.

Report of (Second) AAF Educational Conference. Maxwell Field, Ala.: Air University, 20–22 August 1946.

Report of Symposium on Longe Range Air Force Qualitative Educational Requirements. Washington, D.C.: Department of Health, Education, and Welfare, 17–18 October 1960.

Report of the Task Study Group Alpha. Maxwell AFB, Ala.: Air University, 29 June 1974. AU/ED no. 25A-125.

Report of the University System Board. 3 vols. Maxwell AFB, Ala.: Air University, 1 September 1953.

Report of the USAF Educational Conference, 17 November 1959. Maxwell AFB, Ala.: Air University, December 1959. AU/ED no. 25A-26.

Report of the USAF Educational Requirements Conference. Maxwell AFB, Ala.: Air University, 8 November 1956. AU/ED no. 25A-20.

Report of the USAF Military Education Board on the Professional Education System for USAF Officers. Maxwell AFB, Ala.: Air University, 24–25 January 1950. AU/ED no. 25A-14.

Report of War Department Military Education Board on Educational System for Officers of the Army. Washington, D.C.: War Department, 5 February 1946. AU/ED no. 25A-2.

Student Curriculum Review Committee. *Final Report*. Quantico, Va.: Marine Corps Command and Staff College, 26 May 1987. AUCADRE/RI no. 22K.

Tolson, Billy J. "A History of Air University." PhD diss., University of Oklahoma, 1983.

Tyler, Ralph W. *Analysis of the Purpose, Pattern, Scope, and Structure of the Officer Education Program of Air University*. Project no. 505-040-0003. Maxwell AFB, Ala.: Officer Education Research Laboratory, May 1955.

United States Air Force. *Report of the Study Group on Nonresident PME Emphasis*. Washington, D.C.: Department of the Air Force, Summer 1977. AU/ED no. 25A-166.

United States Air Force/MPCR and Air Training Command/ED. *Senior Service Schools Selection/Designation Process Historical Study—Classes of 47–80*. Maxwell AFB, Ala.: Air University, September 1979. AU/ED no. 25A-181.

USAF Deputy Chief of Staff for Personnel. *Report of a Study on Officer PME Policy*. Washington, D.C.: Government Printing Office, March 1976. AU/ED no. 25A-154.

Waddle, Col Bobby G. *Faculty Civilianization*. Maxwell AFB, Ala.: Air University, 15 November 1978. AU/ED no. 25A-177.

Wright, Col Chris D. *"Tactician" Training within the Air Force Professional Military Education System*. Research Report. Maxwell AFB, Ala.: Air War College, April 1974. M-32983 W9481lt.

Briefings, Catalogs, Minutes, Staff Summary Sheets, Etc.

Air Command and Staff College Orientation and Curriculum Manuals and Catalogs. Maxwell AFB, Ala.: Air University, 1949–1964.

Air Force Vice Commanders PME Conference. Minutes. 14–15 June 1980. AU/ED no. 25A-186.

Air University Catalog. Maxwell AFB, Ala.: Air University, 1946–1948, 1965–1987.

Air University Deputy Chief of Staff for Education. *Air University Objective Plan*. Maxwell AFB, Ala.: Air University, 15 May 1967. AU/ED no. 25A-146.

_____. *Air University Plan for the Development of Air Force Professional Education, 1963–1973*. Maxwell AFB, Ala.: Air University, March 1963. AU/ED no. 25A-53 and M-41843-NC.

_____. "Improvement of AU Educational Programs." Maxwell AFB, Ala.: Air University, 3 April 1968. AU/ED no. 25A-86.

Air University Director of Cost. *Air University Education Digest*. Maxwell AFB, Ala.: Air University, 30 September 1987.

Air University Director of Education. *AU/ED Orientation Program for AU/CC*. Maxwell AFB, Ala.: Air University, June 1979. AU/ED no. 25A-180.

Air University Objective Plan. Maxwell AFB, Ala.: Air University, 15 May 1967.

Air University Suggested Professional Reading Guide. Maxwell AFB, Ala.: Air University, 8 November 1983.

Air University Suggested Professional Reading Guide. Maxwell AFB, Ala.: Air University, 1990.

Air War College Orientation and Curriculum Manuals and Catalogs. Maxwell AFB, Ala.: Air University, 1949–1964.

Armed Forces Staff College Catalog 1987–1988. Norfolk, Va.: AFSC, August 1987. AUCADRE/RI no. 22K.

Army War College Worksheet: Academic Year 1988 versus Proposed Academic Year 1989. Carlisle Barracks, Pa.: Army War College, n.d. AUCADRE/RI no. 22K.

AWC Curriculum Summary 1952–53. Maxwell AFB, Ala.: Air War College, 1951.

Bittner, Maj Donald F. "The Education Center: The Path to Professional Achievement." Quantico, Va.: Marine Corps Development and Education Command, 1979. AUCADRE/RI no. 22K.

Burke, Capt Michael F. *Air University History, Twenty-Fifth (Silver) Anniversary Command Edition—History of the Air Command and Staff College 1946–1971*. Maxwell AFB, Ala.: Air University, 1 February 1971.

Cleveland, Maj Gen C. G. Staff Summary Sheet. Alternative ACSC Programs, 1977. AU/ED no. 25A-167.

_____, director of personnel programs, US Air Force. Staff Summary Sheet. Alternative Officer PME Programs, 22 October 1977. AU/ED no. 25A-167.

Faculty members and commandants of US Army and US Navy professional military education schools. Interviewed by Lt Col Bernard D. Claxton, AUCADRE/RID, 20–30 January 1988 and 7–14 February 1988.

First Session of the 1977 Air Force Education Requirements Board. Minutes. 5 May 1977. AU/ED no. 25A-168(5).

Furlong, Lt Gen Raymond B. Briefing for Corona West. 6 October 1976. AU/ED no. 25A-157.

General Order no. 11. *Redesignation of the Army Air Forces School and Establishment of Certain Other Army Air Forces Schools and Activities*, 15 March 1946. AUCADRE/RI no. 22K.

"A Guide for Professional Reading by Air Force Officers." 1947.

House. *Statement of Maj Gen Howard D. Graves before the Panel on Military Education Committee on Armed Services, House of Representatives Public Hearing*. 100th Cong., 2d sess., 29 January 1988. AUCADRE/RI no. 22K.

Keeley, Col John B. "Some Reflections on the War Colleges." Maxwell AFB, Ala.: Air University, 15 February 1974. AUCADRE/RI no. 22K.

Kelley, Col Robert H. Staff Summary Sheet. Presentations to MAJCOMs on ACSC Alternatives, 29 September 1977. AU/ED no. 25A-167.

Kendrick, Maj Glen A. "Annotated Bibliography of Research on the USAF Professional Military Education (PME) System." Report no. 1300-80. Maxwell AFB, Ala.: Air Command and Staff College, May 1980.

Naval War College. Briefing slides. Newport, R.I.: NWC, n.d. AUCADRE/RI no. 22K.

_____. Internal information sheet. Newport, R.I.: NWC, 8 February 1988. AUCADRE/RI no. 22K.

_____. *Student Handbook*. Newport, R.I.: NWC, n.d. AUCADRE/RI no. 22K.

Naval War College Catalog 1986–1988. Newport, R.I.: NWC, n.d. AUCADRE/RI no. 22K.

"Perennial Issues." Briefing slides. Fort Leavenworth, Kans.: Army Command and General Staff College, n.d. AUCADRE/RI no. 22K.

Powers, Lt Col Marcella V. *A Survey of Studies Addressing Graduate Education in the United States Air Force*. Maxwell AFB, Ala.: Air War College, April 1987.

Proceedings of the Educational Advisory Staff Conference, July 11–12, 1947. Maxwell Field, Ala.: Air University, 1947. AU/ED no. 25A-6.

Proceedings of the Vice Commanders PME Symposium. Maxwell AFB, Ala.: Air University, 25–26 September 1974. AU/ED no. 25A-124.

Program of Instruction. Quantico, Va.: Marine Corps Command and Staff College, October 1986.

"Resume of Topics Discussed with General Brown at the Executive Session on 19 April 1974." Maxwell AFB, Ala.: Air University, 1974. AU/ED no. 25A-119.

Schlatter, Maj Gen David M., deputy commanding general for education, Air University. Welcoming address to the initial classes of the Air War College and Air Command and Staff School. Maxwell AFB, Ala., 3 September 1946.

Schmidt, Robert W. *Air University History, Twenty-Fifth (Silver) Anniversary Command Edition—History of the Air War College 1946–1971*. Maxwell AFB, Ala.: Air University, 1 February 1971.

Skelton Committee Hearings. Carlisle Barracks, Pa.: Army War College, 29 January 1988. Videotape. AUCADRE/RI no. 22K.

Squadron Officer School Orientation and Curriculum Manuals and Catalogs. Maxwell AFB, Ala.: Air University, 1950–1964.

United States Army Command and General Staff College Catalog AY 1987–1988. Fort Leavenworth, Kans.: USACGSC, May 1987. AUCADRE/RI no. 22K.

US Army Command and General Staff College. "Over 100 Years of Learning . . . A Century of Service." Briefing slides. Fort Leavenworth, Kans.: USACGSC, May 1987. AUCADRE/RI no. 22K.

US Army Senior Leadership Center. Briefing slides. Carlisle Barracks, Pa.: Army War College, n.d. AUCADRE/RI no. 22K.

US Army War College. Briefing slides. Carlisle Barracks, Pa.: USAWC, n.d. AUCADRE/RI no. 22K.

_____. *Curriculum Pamphlet, Academic Year 1988.* Carlisle Barracks, Pa.: Army War College, 1988. AUCADRE/RI no. 22K.

US Marine Corps. "Command and Staff College Instructions for Students." Quantico, Va.: USMCCSC, n.d. AUCADRE/RI no. 22K.

US Marine Corps Command and Staff College. Biographies. Quantico, Va.: USMCCSC, n.d. AUCADRE/RI no. 22K.

_____. Briefing book. Quantico, Va.: USMCCSC, n.d. AUCADRE/RI no. 22K.

Letters

Adjutant general to commanding generals, Army Air Forces; Army Air Forces Center; Army Air Forces Training Command; commandant, Army Air Forces School. Letter. Subject: Assignment and Establishment of Army Air Forces Schools, 19 November 1945. AUCADRE/RI no. 22K.

Boulineau, Lt Col Donald H., Air University EC/DHB, to Air University director of education. Letter. Subject: Comparison of Curriculums, 1 October 1961. AU/ED no. 25A-31.

Chief of Academics, Marine Corps Command and Staff College, to Bullpen. Letter. Subject: Reading Requirements for Command and Staff College Students, 14 October 1987. AUCADRE/RI no. 22K.

_____, to distribution. Letter. Subject: Guidance for Student Reading Requirements for Command and Staff College Students, 12 November 1987. AUCADRE/RI no. 22K.

Cleveland, Maj Gen C. G., director of personnel programs, US Air Force, to ALMAJCOM/SOA-CS. Letter. Subject: Requirements for Graduates of Resident Professional Military Education Programs, 11 April 1977. AU/ED no. 25A-168(5).

Fairchild, Maj Gen Muir S., commanding general, Air University, to incoming officers. Letter, n.d. AUCADRE/RI no. 22K.

_____, to Lt Gen Ira C. Eaker. Letter. Subject: Training in Parliamentary Law and Conduct of Conferences, 11 October 1946. (Filed as an attachment to the Orleans report.)

_____, commandant, Army Air Forces School, to Maj Gen Orvil A. Anderson, commandant, Air War College. Letter. Subject: Air University Faculty, 13 February 1946. AUCADRE/RI no. 22K.

Furlong, Lt Gen Raymond B., commander, Air University, to Air University addressees. Letter. Subject: Improving the Quality of PME (AWC/ACSC), 15 October 1975. AUCADRE/RI no. 22K.

_____, to Gen David C. Jones, chief of staff, US Air Force. Letter. Subject: AU Faculty, 17 June 1977. AU/ED no. 25A-164.

_____, to Lt Gen Kenneth L. Tallman, deputy chief of staff for personnel, US Air Force. Letter, 15 December 1975. AU/ED no. 25A-165.

_____, to Lt Gen Kenneth L. Tallman, deputy chief of staff for personnel, US Air Force. Letter, 4 September 1976. AU/ED no. 25A-165.

_____, to Lt Gen Kenneth L. Tallman, deputy chief of staff for personnel, US Air Force. Letter, 17 November 1976. AU/ED no. 25A-167.

Gard, Lt Gen R. G., Jr., president, National Defense University, to the commandants of the National War College and the Industrial College of the Armed Forces. Letter. Subject: Curriculum Development, Academic Year 1977–1978, 7 February 1987. AUCADRE/RI no. 22K.

Ginsburgh, Maj Gen Robert N., director of information, US Air Force, to Gen George S. Brown, chief of staff, US Air Force. Letter. Subject: PME Courses, 10 December 1973. AU/ED no. 25A-119.

Holley, Maj Gen I. B., Jr., USAFR, Retired, to Lt Gen Thomas C. Richards, commander, Air University. Letter. Subject: Suggestions for Strengthening the Air War College Course, 5 September 1984. AUCADRE/RI no. 22K.

Keller, Col Ralph W., Air Force deputy chief of staff for education, to Maj Gen Charles H. Pottenger, vice commander, Air University. Letter. Subject: Structure of the Professional Military Education System, 26 April 1963. Includes attachment and six surveys of professional military education graduates conducted 1960–1961. AU/ED no. 25A-54.

Meehan, John T., director of evaluation and research, to Air University director of plans. Letter. Subject: The University Concept and Air Force PME, 26 July 1976. AU/ED no. 25A-158.

Miller, Lt Gen Troup, Jr., commander, Air University, to Headquarters USAF/AFPDP. Letter. Subject: Report of the Educational Requirements Board on Professional Military Education, 30 August 1963. Includes one attachment: "Air University Position [on] Report of the Educational Requirements Board on Professional Military Education."

Misawa, Col Mamoru, directing staff, Joint Staff College. Letter. Subject: Topics for Discussion, 22 October 1987. AUCADRE/RI no. 22K.

Rogers, Lt Gen F. Michael, commander, Air University, to Gen George S. Brown, chief of staff, US Air Force. Letter. Subject: PME Courses, 30 January 1974. AU/ED no. 25A-119.

Spaatz, Gen Carl A., commanding general, Army Air Forces, to Maj Gen Muir S. Fairchild, commanding general, Air University. Letter. Subject: Individual Self-Expression, 3 June 1946. Includes Lt Gen Muir S. Fairchild's first indorsement. AUCADRE/RI no. 22K.

_____, to Dr Clarence A. Dykstra, provost, University of California. Letter. Subject: Participation on the AU Board of Visitors, 27 March 1946. AUCADRE/RI no. 22K.

Tallman, Lt Gen Kenneth L., deputy chief of staff for personnel, US Air Force, to Gen David C. Jones, chief of staff, US Air Force. Letter. Subject: ACSC Curriculum Length, 2 December 1976. AU/ED no. 25A-167.

_____, to Lt Gen Raymond B. Furlong, commander, Air University. Letter, 5 September 1976. AU/ED no. 25A-165.

Thompson, Jack, to the dean of the faculty and the commandant of the Air War College. Letter. Subject: The Unfulfilled Potential of the Air War College, 4 March 1987. AUCADRE/RI no. 22K.

Todd, Lt Gen Walter E., commander, Air University, to Air Force Combat Command Staff, Headquarters USAF. Letter. Subject: Sixteenth Report of the Board of Visitors, 20 June 1960. Filed with BOV 16 (1960).

Memoranda

Army War College/Academics (AWCA). Draft Memorandum. Subject: Academic Year 1989 Curriculum Guidance, n.d. AUCADRE/RI no. 22K.

Army War College/SA (AWCSA). Memorandum to distribution. Subject: USAWC Statistical Data AY 88, 2 September 1987. AUCADRE/RI no. 22K.

Chauncey, Maj Gen C. C., deputy chief of Air Staff. Memorandum to Maj Gen David Schlatter, acting commandant, AAF School. Subject: Directive Regarding Army Air Forces School, 8 November 1945. AUCADRE/RI no. 22K.

Eaker, Lt Gen Ira C., deputy commander, Army Air Forces. Memorandum to Maj Gen Muir S. Fairchild, commandant, AAF School, 20 December 1945. AUCADRE/RI no. 22K.

Hannifin, Vice Adm Patrick J., director, Joint Staff. Memorandum to the secretary of defense [Harold Brown]. Subject: Professional Development Education, 3 April 1978. AU/ED no. 25A-173.

Holcombe, Col Bondy H., assistant deputy chief of staff for education, Air University. Memorandum. Subject: AU/CC's Concern Regarding 16–17 December 1974 Minutes of the AFERB, 19 March 1975. AU/ED no. 25A-168(5).

Joint Chiefs of Staff. Memorandum to distribution. Subject: Joint Professional Military Education Policy Document, 23 March 1984. AUCADRE/RI no. 22K.

Kelly, J. Michael, deputy assistant secretary of the Air Force for manpower, resources, and military personnel. Memorandum to secretary of the Air Force [Verne Orr]. Subject: Officer Professional Military Education Course Length and Curriculum, 17 October 1984. AUCADRE/RI no. 22K.

_____. Memorandum to secretary of the Air Force [Verne Orr]. Subject: Officer Professional Military Education Faculty, 17 October 1984. AUCADRE/RI no. 22K.

Naval War College. Memorandum to distribution. Subject: Statistical Information on CNW and CNC&S Students Compiled for August 1986 and August/November 1987, 17 November 1987. AUCADRE/RI no. 22K.

Piraneo, Lt Col Charles J., Army Command and General Staff College. Memorandum to Lt Col Lewis I. Jeffries. Subject: CGSC Student Population, 2 September 1987. AUCADRE/RI no. 22K.

Sullivan, Gen Gordon R., Army Command and General Staff College. Memorandum to distribution. Subject: Academic Year 1988–1989 Planning Guidance for the US Army Command and General Staff College, 16 November 1987. AUCADRE/RI no. 22K.

Wilson, Maj Gen Donald, commander, AAF Proving Ground Command. Memorandum to the president, AAF Board. Subject: Army Air Forces Postwar School System, 9 August 1945. AUCADRE/RI no. 22K.

Regulations and Manuals

AAFR 20-61. *Organization, AAF School*, 4 January 1946.

_____. *Organization, Air University*, 5 April 1946; 3 June 1946; 10 October 1946; and Supplement 20-61A, 19 December 1947.

ACSCR 53-2. *Resident Curriculum Development and Management*, 4 May 1987.

ACSCR 53-7. *Student Evaluation*, 20 July 1987.

ACSCR 53-8. *Curriculum Evaluation System*, 24 August 1987.

ACSCR 53-9. *Resident Faculty and Staff Evaluation*, 22 September 1986.

ACSCR 900-4. *Student Special Recognition Program*, 24 August 1987.

ACSCR 900-5. *Air Command and Staff College Awards*, 13 October 1987.

AF Letter 53-21. *Air Command and Staff School*, 28 April 1948.

AFM 50-2. *Instructional System Development*, July 1986.

AFM 50-62. *Handbook for Air Force Instructors*, January 1984.

AFM 53-1. *United States Air Force Officer Professional Military Education System*, 5 May 1966; 15 May 1969; 22 January 1974.

AFP 35-49. *Air Force Leadership*, September 1985.

AFP 36-22. *Officer Career Information*, May 1982.

AFP 36-32. *You and Your Promotions—The Air Force Officer Promotion System*, July 1983.

AFP 50-58. *Handbook for Designers of Instructional Systems*, 6 vols., July 1978.

AFR 23-3. *Organization—Air Commands and Air Forces, Air University*, 4 April 1949; 13 May 1949; 8 May 1950; 3 August 1951; 3 April 1952; 3 December 1952.

_____. *Organization-Field, Air University*, 19 October 1954; 1 July 1959; 31 August 1960; 9 March 1961.

_____. *Organization and Mission-Field, Air University*, 13 June 1963; 3 March 1966; 18 July 1968; 20 December 1968; 1 May 1973; 29 April 1974; 30 November 1977.

AFR 23-6. *Organization and Mission-Field, Air Training Command*, 20 June 1979.

AFR 23-52. *Organization and Mission-Field, Air University*, 23 May 1985.

AFR 30-1. *Air Force Standards*, May 1983.

AFR 30-30. *Standards of Conduct*, June 1983.

AFR 35-1. *Military Personnel Classification Policy*, May 1986.

AFR 35-54. *Rank, Precedence and Command*, September 1981.

AFR 36-10. *Officer Evaluations*, October 1982.

AFR 36-19. *Advanced Academic Degree (AAD) Management System*, March 1983.

AFR 36-20. *Officer Assignments*, October 1985.

AFR 36-23. *Officer Career Development*, March 1985.

AFR 50-5. *USAF Formal Schools*, December 1987.

AFR 50-8. *Policy and Guidance for Instructional System Development*, August 1984.

AFR 50-11. *Management of Training Systems*, August 1984.

AFR 50-12. *Extension Course Program*, April 1986.

AFR 50-31. *Moral Leadership*, October 1969.

AFR 50-38. *Field Evaluation of Education and Training Programs*, March 1986.

AFR 50-44. *The Military Training Standard System*, July 1986.

AFR 50-54. *Field Training Detachment Program*, February 1976.

AFR 53-1. *Air Force Commissioning Education*, November 1987.

AFR 53-7. *USAF Professional Continuing Education Program (Short Courses)*, September 1982.

AFR 53-8. *USAF Officer Professional Military Education System*, 19 April 1976; 16 December 1980; 24 October 1986.

AFR 53-11. *Air Force Institute of Technology*, January 1982.

AFR 53-26. *Air Force Educational Requirements Board*, 12 December 1958.

AFR 53-27. *USAF Officer Training School*, August 1986.

AFSC Pub 10.2. *The Armed Forces Staff College*, March 1987. AUCADRE/RI no. 22K.

AFSC Pub 10.6. *Armed Forces Staff College Catalog 1987–1988*, August 1987. AUCADRE/RI no. 22K.

AFSC Pub 100.9. *Faculty Development Program*, July 1987. AUCADRE/RI no. 22K.

AUR 23-2. *Air War College*, 26 October 1984.

AUR 23-4. *Air Command and Staff College*, 9 February 1987.

AUR 23-13. *Air University Center for Aerospace Doctrine, Research, and Education*, 2 March 1987.

AUR 27-5. *Air University Long-Range Planning*, 20 August 1986.

AUR 30-5. *Academic Rank*, 9 July 1985.

AUR 30-6. *Guest Speakers*, 11 August 1986.

AUR 36-1. *Extended Appointment of Faculty Members*, 27 January 1986.

AUR 36-2. *Colonel Assignments to Air University and Extensions for Colonels*, 7 May 1985.

AUR 50-1. *Faculty Development/Enrichment and Evaluation*, 16 December 1985.

AUR 53-13. *Air University Program Review and Evaluation*, 15 June 1987.

AUR 53-14. *Program Advisory Groups*, 15 October 1987.

Combined Arms Center and Fort Leavenworth PAM 351-1, *Schools, United States Army Command and General Staff College*, 17 November 1986. AUCADRE/RI no. 22K.

SOSR 36-1. *Staff and Faculty Selection and Assignment*, 29 May 1987.

SOSR 50-1. *Student Probation*, 5 June 1987.

Index

AAF (Army Air Forces) Command and Staff Course: 26
AAF (Army Air Forces) Proving Ground Command: 27
AAF (Army Air Forces) Tactical Course: 26
Air Command and Staff College (ACSC)
  curricula and instruction: 10, 24, 35, 39, 41, 58, 66–67, 73–74, 76–77, 80, 102
  faculty: 52–53, 63, 99
  general: 6, 37, 39–40, 75–76, 79, 82
  goals and missions: 35, 38, 40–41, 98
Air Command and Staff School (ACSS): 3–4, 6, 26, 52
Air Corps Tactical School (ACTS): 26–27
Air Force Educational Requirements Board (AFERB) Task Group: 4–6, 20, 31, 58–59, 83–84, 97
Air Force Institute of Technology (AFIT): 19, 57
Air Force Manual (AFM) 53–1, *USAF Officer Professional Military Education System*: 6, 31–32, 34
Air Force Regulation (AFR) 23–3, *Organization—Air Command and Air Forces, Air University*: 30
Air Force Regulation (AFR) 23–52, *Organization and Mission-Field, Air University*: 30–31, 35
Air Force Regulation (AFR) 53–8, *USAF Officer Professional Military Education System*: 6, 26, 34–35
Air Institute of Technology: 1, 3
Air Materiel Command: 4
Air Service School: 26
Air Staff: 69
Air Tactical School (ATS): 3, 26, 52
Air Training Command (ATC): 9, 22
Air University Ad Hoc Committee on Cost Reduction: 69
Air University Board of Curriculum: 69
Air University Board of Visitors (BOV): 3, 7, 18–19, 28, 51–57, 59–61, 65, 74, 76, 78–82
Air University Objective Plan: 20
Air University Regulation 23–16: 79
Air University Review: 20
Air War College (AWC)
  curricula and instruction: 21, 29, 35, 37–41, 56, 66, 73–74, 77, 80, 102
  faculty: 10, 53–54, 61, 63, 83, 99
  general: 3, 26, 28, 37, 52, 58, 75–76, 78–79, 82
  goals and missions: 22, 35–36, 98
Air War College Post-Graduate Study Group: 82
Air War Course: 26
Alpha Group: 74–75
Anderson, Orvil A.: 28, 52
Army Air Forces (AAF): 3, 28
Army Air Forces Regulation (AAFR) 20–61, *Organization, AAF School*: 26, 30
Army Command and General Staff College: 71
Army War College: 28, 66, 72

Bletz, Donald F.: 72
Boards
  Army Air Forces: 27

Fairchild: 3
Gerow: 2, 6, 26
Lightner: 8, 71, 77–78
Power: 5
Rawlings: 5, 18, 54
Bradley, Omar N.: 22
Brown, George S.: 72
Brown, Harold: 75

Chauncey, C. C.: 27
Clausewitz, Carl von: 95
Clements committee: 8, 21–22, 62, 67, 74, 79
Clements, William: 8
Cold war: 36, 40
Collins, John M.: 70
Corona West Conference: 74
Crackel, Theodore J.: 63

Davis, Franklin M., Jr.: 66
Department of Defense (DOD) Reorganization Act: 5–6
Desert One: 9
DOD (Department of Defense) Committee on Excellence in Education: 8
Duke University: 22

Eaker, Ira C.: 27
Eccles, Henry E.: 70, 78
Eglin Field, Florida: 27

Fairchild, Muir S.: 2–3, 18, 28–29, 52, 56, 60, 78, 83, 103
Furlong, Raymond B.: 38, 63, 73–74

Gard, R. G., Jr.: 68
George Washington University: 37, 66
Gerow, Leonard T.: 2
Giannarelli, F. L.: 84–85
Ginsburgh, Robert: 72–73

Hannifin, Patrick J.: 23, 75
Hartmann, Frederick H.: 19, 65
Headquarters USAF: 5, 58, 84
Holley, I. B., Jr.: 22
Hoxie, R. Gordon: 19

Industrial College of the Armed Forces: 68

Joint Chiefs of Staff (JCS): 23–24, 75
Joint Flag Officer Warfighting Course: 10
Jones, David C.: 23, 63
Jordan, Amos A.: 62

Katzenbach, Edward: 68, 70, 75
Kelly, J. Michael: 39, 42
Korean War: 3–4, 7

Langley Field, Virginia: 26
Lightner, Lawrence S.: 8
Luce, Stephen B.: 71

Mahan, Alfred T.: 71
MAJCOMs (major commands): 23, 58–59, 67, 69
Marshall, George C.: 22
Maxwell Air Force Base, Alabama: 54
Maxwell Field, Alabama: 26
McCaughey, John: 71–72
Megaree, Richard: 71
Miller, Troup, Jr.: 83, 84
Murray, Williamson: 68, 70
Mylander, Maureen: 62, 68

National Defense University: 68
National War College: 68
Naval War College (NWC): 65, 70–71
Newman, John Henry: 22

Officer Education Research Laboratory: 54
Officer Education Study: 7–8
Officer PME Study: 10, 24, 64, 76, 80
Orleans, Jacob S.: 4
Orleans report: 4, 18, 54–57
Orr, Verne: 10, 39, 64

PME Faculty Enhancement study: 10
Power, Thomas S.: 5
Professional Military Comptroller course: 67
Professional Personnel Management course: 67
Professional Studies Program (PSP): 37–38
Project Warrior: 9
Project X: 43

Ralph, John E.: 24, 42
Rawlings, E. W.: 4
Report of a Study on Officer PME Policy: 20, 24
Richardson, William R.: 22
Richards, Thomas C.: 22, 64
Rogers, F. Michael: 20, 73
Royal Air Force: 75

Schlatter, David M.: 2, 18, 29, 57
Smith, DeWitt: 72
Southeast Asia (SEA) war: 7, 9, 36–37, 40–42
Spaatz, Carl A.: 28
Sputnik: 5, 59
Squadron Officer Course (SOC): 42, 53, 82
Squadron Officer School (SOS)
  curricula and instruction: 39, 41–42, 58, 73, 76–77, 80, 102
  faculty: 43, 99
  general: 6, 24, 37
  goals and missions: 35, 42–43, 81
Strategic Air Command (SAC): 5, 6, 73

Tailored Instruction Program (TIP): 67
Tallman, Kenneth L.: 23, 38
Taylor, William J., Jr.: 62
Turner, Stansfield: 65–66, 70–72
Tyler, Ralph W.: 4, 54

US Air Force Academy (USAFA): 4
US Army Training and Doctrine Command (TRADOC): 22

Vietnam: 23, 41

West Point: 64
Wilson, Donald: 27