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R E P O R T  
OF THE  
PANEL ON MILITARY EDUCATION  
OF THE ONE HUNDREDTH CONGRESS  
OF THE  
COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED FIRST CONGRESS  
FIRST SESSION



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PANEL ON MILITARY EDUCATION OF THE ONE HUNDREDTH CONGRESS

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## LETTER OF TRANSMITTAL

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HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC, April 3, 1989.*

Hon. LES ASPIN,  
*Chairman, Committee on Armed Services,  
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: Attached is the report of the Panel on Military Education.

I would appreciate your approval of the report so that it may be printed.

Sincerely,

IKE SKELTON, *Chairman,  
Panel on Military Education.*

Enclosure.

Approved for printing:  
LES ASPIN.

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC, November 13, 1987.*

HON. IKE SKELTON,  
*Chairman, Professional Military Education Panel,  
House of Representatives, Washington, DC.*

DEAR IKE: Under the provisions of Committee Rule 6, I hereby appoint a Panel on Military Education of the Committee on Armed Services. I would ask that you serve as chairman of the panel.

I am appointing Mr. Ortiz, Mr. Brennan, Mr. Pickett, Mr. Jack Davis as ranking minority member, Mr. Rowland, and Mr. Kyl to serve as additional members of the panel.

The Panel on Military Education should review Department of Defense plans for implementing the joint professional military education requirements of the Goldwater-Nichols Act with a view toward assuring that this education provides the proper linkage between the Service competent officer and the competent joint officer. The panel should also assess the ability of the current Department of Defense military education system to develop professional military strategists, joint warfighters and tacticians. The panel will report its findings and recommendations, as appropriate, to the committee.

The panel will be established for a period of not more than six months and shall have no legislative jurisdiction.

Sincerely,

LES ASPIN, *Chairman.*

[EDITOR'S NOTE: On November 18, 1987, Chairman Aspin added Rep. Darden as a panel member.]

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# EXECUTIVE SUMMARY

## INTRODUCTION

House Armed Services Committee Chairman Les Aspin appointed Representative Ike Skelton (D-MO) Chairman of a Panel on Military Education. Its charter calls for the panel to assess the ability of the Department of Defense (DOD) professional military education (PME) system to develop officers competent in both strategy and joint (multi-service) matters. In its examination the panel focused on the 10 intermediate and senior PME schools as well as the Capstone course for newly selected general and flag officers (see Chart ES-1).

CHART ES-1—CURRENT PROFESSIONAL MILITARY EDUCATION

(Academic year 1987-88 U.S. Officer Enrollment)

School/Course	Location	Annual U.S. Officer enrollment
<b>Flag/General officer level:</b>		
Capstone.....	Fort McNair, Washington, DC.....	140
Subtotal.....		140
<b>Senior level:</b>		
National War College <sup>1</sup> .....	Fort McNair, Washington, DC.....	118
Industrial College of the Armed Forces <sup>2</sup> .....	Fort McNair, Washington, DC.....	175
Army War College.....	Carlisle Barracks, PA.....	215
College of Naval Warfare.....	Newport, RI.....	173
Air War College.....	Montgomery, AL.....	183
Subtotal.....		864
<b>Intermediate level:</b>		
Armed Forces Staff College <sup>3</sup> .....	Norfolk, VA.....	488
Army Command and Staff College.....	Fort Leavenworth, KS.....	765
College of Naval Command and Staff.....	Newport, RI.....	162
Air Command and Staff College.....	Montgomery, AL.....	450
Marine Corps Command and Staff College.....	Quantico, VA.....	146
Subtotal.....		2,011
Total annual enrollment.....		3,015

<sup>1</sup> Capstone meets four times per year; enrollment is about 35 officers per class.

<sup>2</sup> Joint (multi-service) schools. They are under the National Defense University.

<sup>3</sup> Armed Forces Staff College meets two times per year; enrollment is about 245 officers per class.

Chapter IV provides details on the purposes, scope, and conduct of the panel's assessment. Chapter II, "Educating Strategists," provides a detailed analysis of the attributes required of strategists and how education can contribute to their development. Chapter III, "Joint Professional Military Education," provides a similar analysis for Joint Specialist Officers (JSO), but also discusses joint

education needed by non-JSOs. Because the educational needs of strategists and joint specialists overlap, Chapter IV, "Alternatives for Educating Joint Specialists and Strategists," consolidates the analysis of alternatives and the panel recommendations on schooling for these officers. Finally, Chapter V, "Quality," describes the panel views on how to improve the quality of PME, a necessary foundation for education both in strategy and joint matters.

The basic judgment of the panel is that the DOD military education system is sound. This was brought home most clearly to the panel during its visits to European military schools. The American military schools are fully comparable to even the most prestigious foreign schools. This judgment, however, in no way diminishes the conviction of the panel that significant improvements can and should be made.

The panel's key recommendations are presented below. More detailed and complete summaries of recommendations can be found at the end of Chapters IV and V. The Secretary of Defense has overall responsibility for PME. As his principal military adviser, the Chairman, Joint Chiefs of Staff (JCS), provides him advice and assistance.

#### KEY RECOMMENDATIONS

**RECOMMENDATION 1.** *Establish a PME framework for Department of Defense schools that specifies and relates the primary educational objectives at each PME level.*

The panel believes that educational objectives should be stated clearly in terms of the level of warfare to be taught.

The DOD Committee on Excellence in Education chaired by Deputy Secretary of Defense William Clements in 1975 also pointed out the need to sharpen the focus of the war colleges. Today, of the officers in PME, more than half at the senior level and more than one-third at the intermediate level are attending either a joint school or the school of another service. The panel commends the Department of Defense for these cross-service mixtures. However, a DOD-wide framework is needed now so that each successive level of schooling can build on the previous levels. In addition, the panel agrees with Admiral William J. Crowe, Jr., Chairman, JCS, that education in joint matters should be shared between service and joint schools. Therefore, the framework should tie together curricula at the joint and service schools.

The panel believes the Chairman, JCS, having specific statutory responsibilities both for joint PME and for formulating policies to coordinate all military education, should develop and formalize this PME framework. Recognizing the responsibilities of the Chairman, JCS, the panel suggests the following conceptual framework.



## CHART ES-2—CONCEPTUAL FRAMEWORK FOR PROFESSIONAL MILITARY EDUCATION

PME level	Primary focus
Flag/General Officer.....	National Security Strategy <sup>1</sup>
Senior.....	National Military Strategy
Intermediate.....	Combined Arms Operations and Joint Operational Art <sup>2</sup>
Primary.....	Branch or Warfare Specialty <sup>3</sup>

<sup>1</sup> National Security Strategy should be taught at the proposed National Center for Strategic Studies, which should have colonel/Navy captains, as well as flag/general officers, in attendance (see recommendation 4).

<sup>2</sup> Combined Arms Operations are operations involving multiple branches. Operational Art is the art of warfare at the theater level. Operational Art is inherently joint, but the adjective "joint" is added to ensure recognition of that fact.

<sup>3</sup> Branch means infantry, armor, etc. Warfare Specialty means surface warfare, submarines, etc.

Chapter IV, "Introduction," provides the rationale for this framework.

**RECOMMENDATION 2.** *Improve the quality of faculty (1) by amending present law to facilitate hiring civilian faculty and (2) through actions by the Chairman, JCS, and the service chiefs to ensure that only high-quality military officers are assigned to faculties.*

The panel believes that the quality of faculty is the key to effective education. Improvements can be made in both civilian and military faculties and will be essential to the success of recommendations below concerning follow-on Phase II Joint Specialty Officer education at the Armed Forces Staff College (AFSC) and the proposed National Center for Strategic Studies.

For civilian faculty, the panel recommends amending Title 10 (10 USC 7478), to give the Secretary of Defense and each service secretary the same flexibility in employing and compensating civilian faculty that the Secretary of the Navy currently has.

For military faculty, the panel believes that the Chairman, JCS, and service chiefs must take the lead to ensure that faculties include a higher percentage of officers who have a clear potential for promotion and/or who have proven records of excellence and possess a specific area expertise. Faculty also should possess advanced degrees and be graduates of the appropriate level resident PME for their rank. The panel recognizes that there are special difficulties in getting quality military faculty for joint schools, especially AFSC. The Chairman, JCS, and service chiefs must resolve these difficulties.

**RECOMMENDATION 3.** *Establish a two-phase Joint Specialist Officer (JSO) education process with Phase I taught in service colleges and a follow-on, temporary-duty Phase II taught at the Armed Forces Staff College (AFSC).*

The most fundamental conclusion of the panel is that joint specialist education should take place in joint schools. Joint schools have equal mixes by military department of faculty and student bodies. They are under the control of the Chairman, JCS, so that joint matters dominate the curriculum and joint viewpoints prevail. This conclusion of the panel coincides with that of our World War II military leaders who determined that joint schools were essential.

The panel recommends that *Phase I* be provided not only to potential JSOs but to *all students* attending a service intermediate

college (or senior college as the need arises). Phase I curriculum should include: capabilities and limitations, doctrine, organizational concepts, and command and control of forces of all services; joint planning processes and systems; and the role of service commands as part of a unified command. The Chairman, JCS, should control and accredit the joint portion of the school, including curriculum, faculty qualifications, and faculty and student mixes.

*Phase II* should be given to *graduates of service colleges en route to assignment as joint specialists*. Its curriculum should build on Phase I. Phase II should concentrate on the integrated deployment and employment of multi-service forces. The course should be long enough to provide time for: (1) studying joint doctrine; (2) using case studies in both developed theaters and undeveloped contingency theaters; (3) increasing the understanding of the four separate service cultures; and (4) developing joint attitudes and perspectives. The last two factors, often referred to as "socialization" or "bonding," require finite, but difficult to determine, lengths of time. Considering the above factors, the panel believes the course should be about 3 months in length.

In principle, the panel recommends that no waivers be granted for Phase I education. Panel witnesses emphasized the first requirement for a successful joint officer is that he be an expert in his service. Intermediate schools contribute significantly to service expertise, especially to ensuring that officers have a comprehensive knowledge beyond their branch or warfare specialty.

Another factor that persuades the panel to oppose exceptions for completion of Phase I is the latitude afforded by the Critical Occupational Specialty (COS) option of the Goldwater-Nichols Act. That option allows officers in thinly manned warfare specialties, such as Navy nuclear propulsion, to acquire full joint duty tour credit with only a 2-year assignment (instead of the normal 3 years) *without requiring joint education*. These assignments also count toward the requirement that 50 percent of joint billets be filled by Joint Specialty Officers (JSO) or JSO nominees.

In the near term, however, the panel recognizes that even with close management of joint specialists, the services, particularly the Navy, may require a limited number of waivers.

The panel recommends that the Secretary of Defense make the determination of whether any waivers are needed. Moreover, the panel believes such waivers should be kept to an absolute minimum and be granted by a level no lower than the Chairman or Vice Chairman, JCS, on a case-by-case basis and for compelling cause. The Secretary of Defense should report annually to the House and Senate Committees on Armed Services listing each waiver and the cause for the waiver. Finally, the panel recommends that each officer waived be required to have completed Phase I by correspondence or satellite course and passed a rigorous test verifying his ability to begin Phase II instruction.

**RECOMMENDATION 4.** *Adopt the proposal being developed by the Chairman, JCS, that the National War College be converted to a National Center for Strategic Studies, as both a research and educational institution.*

The panel believes that the study of strategy requires greater emphasis in the senior schools. The service war colleges should increase their emphasis on national *military* strategy (recommendation 5). At the next higher level is national *security* strategy, which includes the military, economic, diplomatic, and political elements of national power. The National Center for Strategic Studies should focus at this level and study the application of all the elements both in peacetime and during crisis and war.

The panel recommends that four institutions be included in the National Center:

(1) An institute for original thought on national security strategy and secondarily, on national military strategy. It should serve both as a "think tank" that wrestles with problems and issues faced by the Chairman, JCS, and senior civilian officials, and as a magnet for attracting national-level scholars, former high-level government officials, and former senior military leaders for the study and teaching of strategic and joint matters. Individuals associated with this institute would also contribute to the other functions of the National Center.

(2) A year-long school of national security strategy and policy for military officers and senior federal officials from branches, departments, and agencies involved in national security matters. The military officers should number about 50 and range in rank from colonel/Navy captain to major general/rear admiral. Perhaps another 25 high-level civilians from industry, labor, media, universities, and other parts of the government outside the national security arena should participate on a part-time basis, similar to the way the French conduct strategic studies at the Institute for Higher Studies of National Defense (see Appendix D). The military students should be graduates of senior PME schools or comparable programs who have the talent, experience, and potential to serve in senior intergovernmental and multinational security assignments. This school would serve as an advanced course for senior Joint Specialty Officers and others with potential for three- and four-star rank.

(3) An institute for the education of newly selected general and flag officers (Capstone, see recommendation 6).

(4) An institute for conducting seminars, symposiums, and workshops in strategy for both the public and private sectors.

**RECOMMENDATION 5.** *At the senior service colleges (1) make national military strategy the primary focus and (2) increase the mix by service of both the military faculty and military students.*

There are two reasons why the senior service colleges should increase their emphasis on national military strategy from the present 20 to 25 percent of the curricula. First, if the National War College is converted into a National Center for Strategic Studies (recommendation 4) with a primary focus on national *security* strategy and policy, the nation will not have a joint school that has a primary focus on national *military* strategy. Second, the intermediate colleges are increasingly, and correctly, teaching operational art (theater-level warfare), an area now emphasized at the senior schools. As graduates of adequate operational art programs reach

the senior colleges, the senior colleges will be able to convert time now spent on operational art to the study of military strategy.

Because national military strategy is inherently joint, the faculty and student bodies at schools teaching national military strategy should be as mixed by service as possible. Although there are difficulties in obtaining equal mixes, a number of panel witnesses recommended increasing them. As obtainable goals, the panel recommends that the service senior colleges attain mixes approximating 10 percent from each of the other two military departments in their faculty and student bodies by academic year 1989-90 and a 25-percent mix by academic year 1995-96. The Chairman, JCS, should establish a phased plan to achieve the longer term goal.

**RECOMMENDATION 6.** *Implement a substantive Capstone course that includes the study of national security strategy and national military strategy.*

The panel believes that the primary educational focus in the current 6-week long Capstone course for all newly selected general and flag officers should remain a significant component of the course. Capstone should continue to teach joint force planning and employment at the theater level. The panel strongly recommends, however, that the course also contain substantial, rigorous study of national security and national military strategy issues. Capstone's length should be increased to incorporate the additional material. In the panel's view, Capstone should be placed under the aegis of the National Center for Strategic Studies to permit shared use of the National Center faculty and facilities.

**RECOMMENDATION 7.** *Review the Navy military education system to determine whether Navy officers should and can attend both intermediate and senior colleges and whether each Naval War College school should have a more distinct curriculum.*

A "two-block" sequential system, with the senior level building on the teaching of the intermediate level, would provide Navy officers with an education more comparable to the other services. It would also help ensure that all officers going to joint schools, joint assignments, or schools of another service have studied the same levels of warfare. Specific teaching approaches will still vary. The review should evaluate whether or not the tactics, techniques, and procedures taught in the Navy's series of frequent, shorter courses could be consolidated with elements of the College of Naval Command and Staff curriculum in a manner that would fit Navy career patterns.

The panel believes the Chief of Naval Operations should conduct the review. The civilian leadership of both the Department of the Navy and the Department of Defense should, however, exercise oversight because the panel considers the issue to have national security implications for the development of the military officer corps and leadership of all services.

**RECOMMENDATION 8.** *Establish the position of Director of Military Education on the staff of the Chairman, JCS, to support his responsibilities for joint PME and for formulating policies to coordinate all military education.*

The 1945 JCS "General Plan for Postwar Joint Education of the Armed Forces," (JCS 962/2), called for such a position, but it was never established.

The recently created Joint Staff Director of Operational Plans and Interoperability (J-7) was given this responsibility. But his other responsibilities, which include war plans, interoperability, and joint doctrine, are so demanding that he has little time for PME. In fact, the senior Joint Staff position with full-time education responsibilities is at the colonel/Navy captain branch chief level. A more senior officer with the appropriate educational background should oversee tasks such as allocating joint curricula among joint and service schools, accrediting schools for joint PME, periodic joint curricula reviews, establishing joint specialist education policies, and providing high-quality faculty for joint PME. Unlike the President of the National Defense University (NDU), such a director would not be perceived as having divided interests between advising the Chairman and operating the university.

*RECOMMENDATION 9. Require students at both intermediate and senior PME schools to complete frequent essay-type examinations and to write papers and reports that are thoroughly reviewed, critiqued, and graded by faculty.*

The panel believes that such writing and evaluation are essential elements of graduate-level education. Writing requires students to organize their thoughts on specific subjects and to become actively involved in the learning process. Faculty evaluations are part of the learning dialogue and help to establish standards. Graded evaluations will also facilitate determining distinguished graduates and the panel recommends that they be designated at all colleges.

The panel heard arguments that tests fostered harmful competition among students. However, the experiences of the Naval War College and the intermediate colleges do not indicate that any resulting competition is harmful.

#### SUMMARY COMMENTS

The panel believes that the major subject of professional military education should be the employment of combat forces, the conduct of war. Other subjects such as leadership, management, and executive fitness are useful but should be secondary.

The framework of the PME system should divide the spectrum of war so that as an officer becomes responsible for larger units, the schools he attends will focus on larger scale operations. There is an implicit basis for such a framework in the current system. Each service would benefit its intermediate and senior schools by making the framework explicit. The substantial exchange of PME students between services, which the panel believes is beneficial and should increase, is an additional reason for the Chairman, JCS, to make the framework explicit.

The framework that the panel suggests for the consideration of the Chairman, JCS, is to have the primary-level schools ("basic" and "advanced" schools) focus on branch or warfare specialty, as they do now (see Chapter IV).

The intermediate schools should broaden an officer's knowledge to cover other branches of his own service (what the Army calls

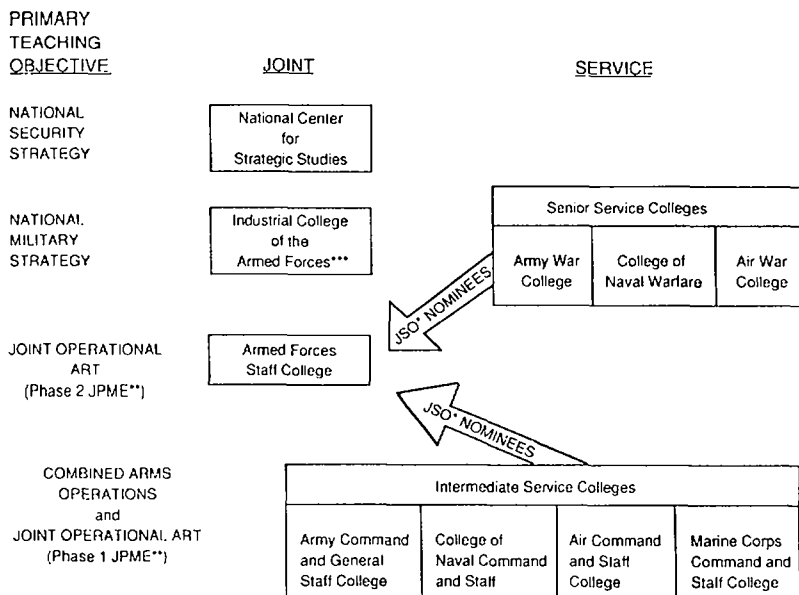
“combined arms”) and other services and should focus on operational art, or theater-level warfare. The panel believes the intermediate schools should also be the principal schools for learning jointness. Everyone who attends service intermediate schools should learn the mechanics of joint matters that all officers should know: other service capabilities, limitations, and doctrines and the relevant joint processes—the Joint Strategic Planning System and the Joint Operations Planning System. The graduates of service schools going to initial assignments as joint specialists (or nominees) should attend a second phase at a joint school, the Armed Forces Staff College (AFSC), which should focus on case studies of joint force employment and inculcate a joint perspective. The most fundamental recommendation of the panel is that this *joint specialist education should be accomplished in a joint school*.

The senior schools should focus on strategy. The panel recommends that the service war colleges increase their emphasis on national *military* strategy. Selected graduates of service war colleges with the talent and potential to work in the national *security* strategy area should attend the proposed National Center for Strategic Studies.

Capstone should continue with its focus on jointness in force employment but add the substantive study of strategy issues. If the emphasis on strategy and jointness recommended by the panel and required by the Goldwater-Nichols Act are fully realized, perhaps 10 years in the future, the mission and need for Capstone should be reexamined.

The successive and progressive framework for PME schools that the panel suggests is shown on Chart ES-3.

**CHART ES-3**  
**RECOMMENDED FRAMEWORK**  
**FOR PROFESSIONAL MILITARY EDUCATION**



\*JSO = Joint Specialty Officer

\*\*JPME = Joint Professional Military Education

\*\*\*ICAF is at the same level as the Senior Service Colleges; its primary teaching objective is in the mobilization area.

### CONCLUSION

The panel believes its recommendations are in conformity with the hard-gained insights and wisdom of American World War II military leaders. During the middle of that war, the Joint Chiefs of Staff created the Army-Navy Staff College (ANSCOL). Its purpose was to increase the numbers of senior officers with the knowledge and skills to employ joint forces. George Marshall, Ernest King, and "Hap" Arnold established the precedent that joint education should be accomplished in joint schools.

The panel believes that two joint schools—the Armed Forces Staff College and the proposed National Center for Strategic Studies—should become the premier schools for teaching joint operations and strategy. The Armed Forces Staff College should become the flagship educational institution that serves as a gateway for

entry into joint specialist assignments, and the National Center for Strategic Studies should stand at the pinnacle of the study of strategy. The panel believes that by adopting this course our country can combine greater operational competence with sound, imaginative strategic thinking.



## CHAPTER I—INTRODUCTION

### ESTABLISHMENT OF THE PANEL ON MILITARY EDUCATION

On November 13, 1987, House Armed Services Committee Chairman Les Aspin established the Panel on Military Education and appointed Rep. Ike Skelton (D-Mo.) as its chairman and Rep. Jack Davis (R-Ill.) its ranking minority member. Other panel members are: Reps. Solomon Ortiz (D-Tex.), George (Buddy) Darden (D-Ga.), Joseph E. Brennan (D-Maine), Owen B. Pickett (D-Va.), John G. Rowland (R-Conn.), and Jon Kyl (R-Ariz.).

#### BACKGROUND

Creation of the panel signifies recognition by the Congress that rigorous, high-quality professional military education (PME) is vital to the national security. It is an investment in the future military leadership for war and peace. Committee interest in PME is a direct consequence of its earlier work, from 1982 until 1986, on defense reorganization. With the passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, Congress reached back to the lessons concerning the importance of joint military operations learned by such World War II leaders as Eisenhower, Marshall, and Nimitz and insisted that today's defense establishment reflect their hard-won insights.

The primary objective of the Goldwater-Nichols Act is to strengthen the joint elements of the military, especially the Chairman of the Joint Chiefs of Staff (JCS) and the commanders in chief (CINC) of the combatant commands. The act's primary method is to change organizations and their responsibilities. These organizational changes are centered in Title II, "Military Advice and Command Functions," which designated the Chairman, JCS, "the principal military adviser to the President, the National Security Council, and the Secretary of Defense" and gave the CINCs clear command authority over subordinate commands and forces assigned.

In order to benefit fully from these organizational changes, Congress believed it had to improve the performance of officers assigned to joint elements. The required personnel changes are contained in title IV of the act, "Joint Officer Personnel Policy." These personnel changes are designed to ensure quality and two related factors—experience and education. This study focuses on education.

Education is important both for learning facts and for affecting attitudes and values. Specifically, joint education can broaden an officer's knowledge beyond his own military service to joint, multi-service matters and can help the officer develop a joint perspective. The Goldwater-Nichols Act would enhance joint education both to meet the increased responsibilities of the joint elements and to provide officers with joint perspectives. Education on joint matters is a

basic link between a service competent officer and a joint competent officer. Further, joint education is a major way to change the professional military culture so that officers accept and support the strengthened joint elements.

Using educational change to supplement and reinforce organizational change is not unique to the Goldwater-Nichols Act.

In 1898 the Spanish-American War made it clear that the Army's organization suffered from divided authority that could not meet 20th-century needs. Secretary of War Elihu Root established the Army War College in 1901 and by 1903 had legislation creating a Chief of Staff and an Army General Staff. All three changes increased integration of the Army.

After World War II, the joint schools were established—the National War College and the Industrial College of the Armed Forces in 1946 and the Armed Forces Staff College in 1947. Further, the National Security Act of 1947 (as amended in 1949) created the Secretary and Department of Defense, and formally established the Joint Chiefs of Staff. Again, both the organizational and educational steps were unifying ones.

Military leaders are not the only ones who have emphasized the importance of military education. In fact, it was Winston Churchill in 1946 who best described the contribution of professional military education to U.S. success in World War II:

That you should have been able to preserve the art not only of creating mighty armies almost at the stroke of a wand—but of leading and guiding those armies upon a scale incomparably greater than anything that was prepared for or even dreamed of, constitutes a gift made by the officer corps of the United States to their nation in time of trouble . . . I shall always urge that the tendency in the future should be to prolong courses of instruction at the colleges rather than to abridge them and to equip our young officers with that special technical professional knowledge which soldiers have a right to expect from those who give them orders, if necessary, to go to their deaths. Professional attainment, based upon prolonged study, and collective study at colleges, rank by rank, and age by age—those are the title reeds of the commanders of the future armies, and the secret of future victories.

Recognizing the importance of professional military education, many studies have assessed the schools. Thus, the services have conducted numerous reviews of their PME systems and the Joint Chiefs of Staff have studied service and joint PME, especially during and soon after World War II. The Office of the Secretary of Defense has conducted a few studies, the most notable being the DOD Committee on Excellence in Education chaired by Deputy Secretary of Defense William Clements in 1975. However, the Skelton Panel on Military Education is the first Congressional review of overall professional military education.

#### THE PANEL'S CHARTER

The panel was chartered by Chairman Aspin to study two areas of professional military education. First, it was to "assess the abili-

ty of the current Department of Defense military education system to develop professional military strategists, joint warfighters and tacticians." Second, it was to "review Department of Defense plans for implementing the joint professional military education requirements of the Goldwater-Nichols Act with a view toward assuring that this education provides the proper linkage between the service competent officers and the competent joint officers."

A third area of inquiry, though not stated, was implicit in the terms of the panel's charter and also required explicit examination. This area was the quality of military education. Quality is important because it is the foundation for successful education in both strategy and joint matters. Further, considerations of quality can logically be discussed separately from the other two. Accordingly, this report addresses three PME areas: strategy, jointness, and quality.

### SCOPE OF THE STUDY

To determine where to concentrate its efforts, the panel had to relate the areas of its examination to the levels of existing PME schools. The first level of military education—precommissioning education—is accomplished in service academies, in Reserve Officer Training Corps (ROTC) units at civilian colleges, and at Officer Candidate Schools (OCS).

#### LEVELS OF PME

After commissioning, formal officer PME can generally be categorized into four levels for the purposes of this study:

(1) *Primary Level.* These courses are normally attended within the first 8 years after commissioning and are focused on the officer's branch or specialty. At this level, the Army requires the basic and advanced courses, for example, in infantry or armor. In the Navy, there are warfare specialty courses, for example, the submarine warfare officer or department head courses. Also included in this category are courses that teach leadership and staff skills or introduce officers to aspects of their service outside their specialty. The Army Combined Arms and Services Staff School (CAS3) and Air Force Squadron Officers School (SOS) are typical examples of these schools.

(2) *Intermediate Level.* These courses are normally attended between the 10th to 15th year of service when the officer is a major or lieutenant commander. At the Army intermediate school at Fort Leavenworth, the primary focus is not on how a single branch operates, but how various branches, say infantry, armor, and artillery, fight together, as a "combined arms" team. In addition, the Army school focuses on "operational art," i.e., war at the theater level. The four service command and staff colleges and the joint Armed Forces Staff College (AFSC) comprise this category.

(3) *Senior Level.* These courses are normally attended between the 16th to 23rd year of service when the officer is a lieutenant colonel or colonel (Navy commander or captain). While curricula vary, the war colleges generally study both operational art and strategy. The three service war colleges and the two joint colleges—the National War College and the Industrial College of the

Armed Forces—make up the senior category of schools. The Marine Corps has no senior school; it sends its officers to the other schools.

(4) *General/Flag Officer Level.* In the past, the services created short courses for their flag officers. By the early 1980s many had come to believe that senior officers were not being adequately prepared for joint command and staff responsibilities. Starting in 1983, the Joint Chiefs of Staff established a joint course, called Capstone, for newly selected general and flag officers. Initially Capstone was an optional program, but in 1986 the Goldwater-Nichols Act made it mandatory (with some exceptions) for all newly selected general and flag officers.

During its review, the panel found a broad consensus that as an officer ascended in rank and assumed broader responsibilities, his focus on both joint matters and strategy should increase. Although officers are introduced to both areas in primary-level schools (and precommissioning schools as well), they are not studied in depth until the intermediate level. The panel agrees that the intermediate level is the appropriate point to begin intensive study of joint matters and strategy. Consequently, *the panel's inquiry centered on the highest three PME levels: intermediate, senior, and general/flag officer* (see Executive Summary Chart ES-1).

#### PROGRAMS RELATED TO FORMAL PME

The panel's focus on formal PME excluded detailed enquiry into a number of closely related areas, the most important being the following:

*Experience On-the-Job.* Experience is the most basic and the most in-depth education. However, in the complex national security area, no one can directly experience everything he or she needs to know, especially during peacetime. The panel recognizes that formal education tours essentially are nodes in what should be career-long educational development.

*Self-development.* In his testimony to the panel, Army Chief of Staff General Carl Vuono put the importance of self-development to an officer's career in excellent perspective when he stated that the Army officer education system rests on three fundamental pillars: individual self-development, operational experience, and formal education. Even though this study focuses primarily on formal schooling, the panel fully agrees with the importance of all three pillars. The panel believes that education in schools can and should also play a role in self-development. Schools can acquaint officers with books, journals, faculty, interested fellow students, and other resources, and motivate officers to study on their own.

The panel believes command emphasis is also required to encourage self-development. It commends the many instances it found of such emphasis, but nevertheless believes more should be done. The Army's 1985 "Professional Development of Officers Study" said, "A lifestyle of life-long education is a must, not an option. An officer must be *expected* to study, not allowed to."

*Civilian Universities.* Education in civilian universities can be very useful, especially for studying strategy. Civilian universities can also help in education on joint matters, for example, in the study of military history, area studies, and international relations.

However, civilian universities have difficulty replicating the environment of military schools in terms of selected, experienced officers serving both on the faculties and as students, and in access to current, often classified, military information. The interaction among students with 10 to 25 years' experience in the major subject being taught is a benefit that is unique to PME schools. The role of civilian education in PME is addressed in Chapter II.

*Specialized Joint Military Schools.* The panel did not address in detail specialized joint military schools, such as the Defense Systems Management College at Fort Belvoir, Virginia, and the Defense Intelligence College at Bolling Air Force Base, Washington, D.C. Because approximately 1,200 of the over 8,300 billets on the joint duty assignment list require intelligence officers, the panel initially considered looking at the Defense Intelligence College and the role it could play in joint education. In the end, however, the panel decided that the issue should be left for the military to address after more basic issues are resolved.

*Foreign PME Schools.* The panel recognizes the U.S. military sends a number of students to foreign PME schools. It believes attendance by U.S. students is beneficial. We make excellent contacts and learn different ideas about the employment of forces and teaching PME as well as learning about other countries and their armed forces. While the panel did discuss this education during its visits to European schools, it did not address the subject in detail.

*Service Graduate Education Institutions.* The panel also did not address in detail the two service institutions of graduate education, the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio, and the Naval Postgraduate School at Monterey, California. Neither school focuses on PME, is under control of a joint authority, or has equal service mixes of faculty and student bodies. Therefore, they would not be appropriate schools for joint education. However, the Naval Postgraduate School does have a Department of National Security Affairs that can contribute to education on strategy. This is discussed in Chapter II.

## HOW THE STUDY WAS CONDUCTED

After the panel was chartered, the House Armed Services Committee established a professional military education panel staff under the guidance of permanent committee staff. The PME panel staff consisted of a permanent committee staff member and four officials assigned for 1 year from the Department of Defense to the panel chairman. These four were representatives from the Office of the Secretary of Defense (OSD) and the three military departments—the Army, Navy, and Air Force. Collectively, they graduated from six of the intermediate and senior military colleges and two of them had been on war college faculties. Besides their knowledge of the military and its PME, they served as conduits for obtaining information from the four services.

The panel reviewed previous studies and collected data and historical studies about the PME system from the Department of Defense. It received briefings from OSD, the Organization of the Joint Chiefs of Staff, and the services, particularly from education and personnel offices. The panel interviewed over 100 current and

former, military and civilian, educators, officials, leaders, and critics. It talked with individuals responsible for education, those conducting it, those employing graduates, and students themselves (see Appendix D for a list of interviewees).

The panel visited all 10 U.S. senior- and intermediate-level PME schools and held hearings with all the school commandants and presidents. It attended classes and talked separately with school faculties, senior staff, and students. The panel supplemented the visits with data, interviews, briefings, previous reports, and other literature.

The panel also heard testimony from the Deputy Secretary of Defense, the Chairman of the Joint Chiefs of Staff, all four service chiefs, four commanders in chief (CINC) of combatant commands, civilian educators, and former service chiefs, CINCs, civilian defense officials, and military educators. In all, 48 witnesses formally testified at 28 hearings in Washington and at the schools (see Appendix C for a list of hearings). A verbatim record of the hearings is published in a separate volume.

The panel also visited or was briefed on the British, French, and German military schools that most closely compare with the U.S. intermediate- and senior-level colleges. In Britain, these were the Royal College of Defence Studies in London; the Joint Service Defence College and the Royal Navy Staff Course, both in Greenwich; the Army Staff College and the Higher Command and Staff College, both in Camberley; and the Royal Air Force Staff College in Bracknell.

In France, the panel visited the Center for Higher Military Studies (CHEM) and its associated civilian Institute of Higher National Defense Studies (IHEDN); the Army/Navy/Air Force/Joint Senior Staff Colleges; and the Allied Staff College, all in Paris.

In West Germany, the panel visited the Fuhrungsakademie (called in English the General/Admiral Staff College) in Hamburg.

The Congressional Research Service (CRS) of the Library of Congress and the General Accounting Office (GAO) provided editorial assistance. The panel especially appreciates the work of Robert L. Goldich of CRS and Douglas E. Cole of GAO.

## ASSUMPTIONS

This inquiry accepts the provisions of the Goldwater-Nichols Department of Defense Reorganization Act of 1986 (Public Law 99-433, October 1, 1986), as amended, and its intent as understood by the panel. In fact, the panel members' acceptance and support of the intent of title IV of the act, "Joint Officer Personnel Policy," to establish a category of officers called Joint Specialty Officers (JSO), was a major factor in shaping the conclusions and recommendations of study.

The panel also accepts as a given for its study the size—about 8,300 positions—of the Joint Duty Assignment (JDA) list established by the Secretary of Defense in response to a Goldwater-Nichols Act requirement. Therefore, all the educational alternatives the study considered had to be able to meet the educational requirements of that number of positions.

Despite acceptance of the JDA list for purposes of the study, the panel believes the list, which is far larger than originally expected, can and should be both improved and reduced significantly. In the first place the list was not compiled using a position-by-position analysis as Congress expected. Instead it was compiled using a method that invited the inflation that occurred—counting as joint positions either 100 percent of those in joint organizations directly responsible for joint planning and employment (joint staffs and OSD) or 50 percent of those in joint organizations providing support for joint planning and employment (defense agencies). The panel believes that a position-by-position review would reduce the list's size. Moreover, because the number of officers who require education in a joint school is calculated from the JDA list, a reduction would also decrease the requirement for joint specialty officer education and could, thus, save money.

The panel also assumes that Coast Guard, National Guard, and Reserve officers will continue to participate in PME schooling as in the past. It believes these officers are an important part of our "total force" and must have opportunities for PME.

### OVERALL PANEL VIEWS

Chapters IV and V analyze and present the panel's views on its three principal areas of investigation—strategy, jointness, and quality. However, the panel developed certain views that are essential to understanding the remainder of the report.

*First*, professional military education is vital to our national security. This fundamental view was reconfirmed during all of our visits. There are two steps to the logic of why PME is vital. One is the necessity of preparation for war. As our first Commander in Chief, George Washington, said "to be prepared for war is one of the most effectual means of preserving peace." Second, officer professional military education is an essential part of that preparation. In *The Military Policy of the United States*, published in 1904, civil war brevet Major General Emory Upton, wrote:

In every military system which has triumphed in modern war the officers have been recognized as the brains of the army; and to prepare them for their trust, governments have spared no pains to give them special education and training.

*Second*, the panel believes that PME is becoming increasingly important. A former Army Chief of Staff observed that technological change alone, not to mention political, social, and international turmoil, requires that our officer corps receive more education. The 1988 Report of the Commission on Integrated Long-Term Strategy, *Discriminate Deterrence*, highlighted future technology's potential impact:

Dramatic developments in military technology appear feasible over the next twenty years . . . these developments could require major revisions in military doctrines and force structures.

A case can be made that if in the future resources constraints become tighter, better PME can help offset these constraints. After World War II, former Secretary of War Robert Patterson observed:

. . . in the 1920's and 1930's the Army was too poor to hold maneuvers. Schools cost very little, so the Army, denied the training opportunities afforded by maneuvers, went the limit in sending soldiers to school. It never made a better investment.

*Third*, the panel occasionally heard the argument that requirements to serve operational tours preclude the best officers from attending PME schools. "If the best officers are sent to school, readiness will suffer," the panel was told. The panel believes, however, that the best officers can and should have both operational duty and education. While today's readiness may suffer slightly when a fine commander goes to school, when he returns from school his increased knowledge should mean higher future payoffs. Particularly if PME focuses on warfighting, we can help avoid the difficulty Maurice Comte de Saxe identified when he said:

Few men occupy themselves in the higher problems of war. They pass their lives drilling troops and believe this is the only branch of the military art. When they arrive at the command of armies they are totally ignorant, and *in default knowing what should be done—they do what they know.*

A related view on the need for both field experience and education is given by the noted British soldier and author of the last century, Sir William Francis Butler:

The nation that will insist on drawing a broad line of demarcation between the fighting man and the thinking man is liable to find its fighting done by fools and its thinking done by cowards.

A modern perspective was expressed by Chairman of the Joint Chiefs of Staff, Admiral William J. Crowe, Jr., who wrote in the spring 1987 edition of *Parameters*:

Our instincts work all too often in favor of improving capabilities for action, while capacities for reflection languish and atrophy. I can testify that the military half of the great American civil-military partnership is especially vulnerable to capture by these dynamics. In today's world it would be a tragedy to neglect the intellectual dimensions of leadership, and we must continue the fight to keep the war colleges not only healthy but constantly improving and intellectually expanding.

*Fourth*, a basic judgment of the panel is that the DOD military education system is sound. This was brought home clearly to the panel during its visits to European military schools. The American military schools are fully comparable with the prestigious foreign schools the panel saw.

The panel was impressed with the presidents and commandants of our military colleges. Some are exceptionally able, and their ef-



forts to improve their schools were apparent. Many faculty members were outstanding and obviously dedicated to teaching. The student bodies universally were first rate. Even within this high overall quality, certain aspects stood out as examples worth emulating. One was the outstanding civilian faculty and strategy curriculum at the Naval War College at Newport, Rhode Island. Another was the Army's School of Advanced Military Studies (SAMS) at Fort Leavenworth, Kansas, with its knowledgeable and enthusiastic seminars focused sharply on operational art—theater-level war-fighting.

*Fifth*, our basic view is that despite the soundness of the system, improvements can be made. The following chapters contain alternatives and recommendations for improving PME in strategy, joint matters, and quality.

One needed improvement transcends these three subject areas: the Department of Defense should have a clear and coherent conceptual framework for the PME school system as a whole.

### CONCEPTUAL FRAMEWORK FOR PME SCHOOLS

What does a “conceptual framework for PME schools” mean and why is it important? As used by the panel, such a framework consists of at least four elements. First, the framework identifies the levels of professional schooling (e.g., primary, intermediate, senior, and flag/general officer). Second, it clearly and distinctly establishes the primary focus of each level in terms of its primary teaching objective (in military terms, its “mission”). Third, the framework links the education levels together into an overall structure, relating the principal teaching objectives so that each level of school prepares officers for the next level as they progress through the system. Fourth, the framework identifies the unique contribution of each school within its level. The resulting framework should clearly distinguish and relate the primary focus of each of the 10 intermediate and senior schools plus general/flag officer courses.

#### NEED FOR PME FRAMEWORK WITH DISTINCT TEACHING OBJECTIVES

The panel believes that for a number of reasons distinct primary teaching objectives are needed. First, they clarify purposes. General Andrew Goodpaster, USA (Ret.), formerly Supreme Allied Commander Europe, Superintendent of the U.S. Military Academy, and Commandant of the National War College, said:

In fact, until you're clear about the purpose in institutions of that kind, you run the risk of diffusion of effort and lack of clear sense on the part of all the participants, as to just what is it they're trying to do.

The clearer, sharper and more distinct that primary mission is, the better the school can carry it out.

Second, they ensure coherence so that each succeeding level of school builds on the earlier level and avoids *unnecessary* overlap. The panel recognizes that there is need for overlap in the PME system, but it should be consciously chosen and not be the result of unclear mission statements.

Third, distinct teaching objectives avoid gaps in needed education. For example, the past failure to teach theater-level warfare (operational art) may have been partly related to the absence of a clear focus at each level of school.

Fourth, they facilitate cross-service officer education. This is even more important now than in the past because today *over half of the officers in senior schools attend either a joint or other-service school*, as do over one-third of the officers in intermediate schools. The panel believes this cross-service education contributes significantly to jointness and should increase.

#### SHORTCOMINGS OF THE CURRENT PME FRAMEWORK

Establishing a coherent PME system is the legal responsibility of both the Secretary of Defense and the Chairman, JCS. Title 10 US Code makes the Chairman responsible for "formulating policies for coordinating the military education and training of members of the armed forces." Since passage of the Goldwater-Nichols Act, it also assigns specific responsibility for *joint* military education to the Secretary of Defense, with the advice and assistance of the Chairman, JCS.

In fulfilling the coordination functions, the Chairman has issued the "Joint Professional Military Education Policy Document" (SM-189-84, March 23, 1984). The document, whose stated purpose is to provide a framework for professional military education, provides both general objectives for all PME programs and specific objectives for each level. The policy document has two flaws.

First, it lists six specific PME objectives at the intermediate level and eight at the senior level, but establishes no priorities among them. With so many unprioritized objectives, each school can choose its own primary focus.

Second, even the specific objectives for the intermediate- and senior-level schools are stated in such general terms that they do not provide a sharp enough focus for either level. An example is the document's objectives for joint and combined warfare. At the intermediate level the objective is "to provide a basic understanding of joint and combined warfare." At the senior level the objective is "to provide knowledge about, and to enhance individual capability to participate in, the planning and employment of joint and combined forces." Again, this vagueness gives the schools too much latitude to decide what they will concentrate on.

In short, the panel finds that the Joint PME Policy Document is not a useful framework for coordinating PME because it contains indistinct teaching objectives. The present school system is the result and it is not a coherent system. In these judgments, the panel is not alone.

For example, the President of the National Defense University, Lieutenant General Bradley Hosmer, said in testifying before the panel:

I think it is fair to describe PME as a whole as a collection of individual organizations and missions which have grown up quite properly addressing individual problems. The service colleges have responded to service requirements for professional military education and have done so

very well. But backing off and looking at the system as a whole, what I see are piecemeal answers to piecemeal problems.

In 1975 the DOD Committee on Excellence in Education, chaired by the Deputy Secretary of Defense William Clements, also found this lack of sharp focus or distinct teaching objectives. About the senior colleges, it reported:

The criticism is that in spite of a degree of individual focus inherent in each college by virtue of its title and the vernacular of its subjects, the depth and concentration actually devoted to each particular field is not on a level requisite for national educational institutions devoted to excellence in these fields. To the extent that criticism is valid, the Committee considers the appropriate response to be a *sharpening of focus and a deepening of true expertise* in the avowed mission fields. (Italics added.)

Whatever the historic reason for the "piecemeal" structure of PME, the panel agrees that a sharpening of focus is still required not only for the senior colleges but also for the intermediate colleges.

As the quote from the Clements' report suggests, there is an implicit basis for a framework in the current PME system. The difficulty is that the current focus of each level is not explicit and clear. The results in the current system are a lack of concentration on what should be the primary focus, a diffusion of efforts, and unnecessary redundancy. In military strategy terms, there has not been a determination of the "center of gravity" in the curricula on which each level of schools should focus.

To solve these problems, the panel believes a framework that has distinct primary teaching objectives and that integrates the PME schools into a coherent system should be developed and implemented. To establish and codify the PME framework, the Chairman, JCS, should revise the "Joint Professional Military Education Policy Document" with more specific objectives for the entire PME system.

After Chapters II and III examine education in strategy and joint matters respectively, Chapter IV evaluates alternatives and presents a proposal with a clear, coherent PME framework. Chapter V examines and presents recommendations on quality, which serves as a foundation for education in both strategy and joint matters.

## RECOMMENDATIONS

1. The Department of Defense should develop and implement a clear and coherent conceptual framework for the professional military education school system. The framework should have distinct primary teaching objectives. It should clearly distinguish and relate the role of each of the 10 PME schools plus general/flag officer courses. Each level of schooling and each school should have a primary focus that provides students with a foundation for future growth through experience and operational and staff assignments and through additional education at high-level PME schools.

2. The Chairman, JCS, should revise the "Joint Professional Military Education Policy Document" to establish and codify the PME framework with more specific objectives for the entire PME system.

3. The joint duty assignment list, which is far larger than originally expected, can and should be both improved and reduced significantly.

## CHAPTER II—EDUCATING STRATEGISTS

### INTRODUCTION

A major part of the panel's effort was directed at assessing how well the current professional military education system encourages strategic thinking and the development of strategists. The panel's focus on strategy was prompted by a perception of shortcomings in the formulation and articulation of U.S. strategy and a concern about whether the PME system is nurturing officers, as it did in the past, who can contribute to both the development and execution of U.S. military and national security strategy.

Although the panel does not necessarily agree with those who criticize U.S. strategy, it does believe that U.S. strategy is too important to leave to chance. Recognizing that the formulation of a national strategy is essentially a political process, the panel nonetheless believes that:

—Well-educated military officers who can think strategically have an important contribution to make to the development of strategy.

—There is an overwhelming need for the military education system to improve its contribution to strategic thinking.

In the past, geography and technology enabled the United States to wait until wartime to draw upon the strategic vision of its military leaders. However, the era of violent peace that emerged after World War II has created a need for military officers who can contribute their strategic vision during peacetime. The panel, by its emphasis on strategy, intends to underscore the fact that the development of officers who can think strategically is as vitally important to U.S. security as effective weapons systems and adequate supplies of munitions.

In making its assessment, the panel first focused on the *definition* of the term "strategy" and the *attributes* of a "strategist." This effort helped the panel to understand better the contribution of education, and particularly professional military education, to the development of strategic thinkers. The panel was then in a position to examine the adequacy of the strategy curricula at the senior PME schools. Finally, the panel looked at how carefully the Department of Defense manages what will even in the best of circumstances be a very scarce resource—military officers who think strategically. Following a brief discussion of the adequacy of U.S. strategic thinking and the contribution of military officers to its development, this chapter addresses each of the above subjects in turn.

## MILITARY PARTICIPATION IN STRATEGIC THINKING

Critics of U.S. strategic thinking often point to specific incidents involving the use of military force or to issues concerning the linkage between military force and national goals. Examples frequently cited by such critics include:

- The American experience in Vietnam.
- The concern that U.S. military capabilities are inappropriately skewed toward unlikely contingencies and as a result, are inadequate for more probable low-intensity conflict.
- The belief that inadequate attention is paid to the arms control implications of defense policy.
- The lack of attention paid to the affordability of weapons systems or force structure.
- The tendency for the annual defense debate to focus on the number of fighters, tanks, and frigates with too little consideration of how individual weapons systems contribute to either our military capability or our overall national security objectives.

Some experts have even questioned whether the U.S. has a clearly articulated national security strategy. For example, House Armed Services Committee Chairman Les Aspin is among those who see the need to shift the emphasis of the debate over defense policy from the weapons we buy to the strategy we employ to secure our national objectives. According to Chairman Aspin, decisions on military forces are only tenuously related to overall national security objectives:

Anyone with the barest knowledge of military history knows you don't prevail with weapons alone; you have to start with a strategy. Right now, I fear, our strategy is be everywhere and do everything. That's no strategy; that's a prescription for disaster.

Historically, according to some scholars, the formulation and execution of U.S. military policy has been hindered by a difficulty in clearly linking military policy with a strategic perspective. This school sees the American tradition of pragmatism—in the words of de Tocqueville, the tendency to “take a straight and short road to practical results”—as impeding strategic thinking. Strategic thinking requires the connection of diverse but interrelated issues into a systematic pattern.

In the panel's view, a related problem has impeded a more noteworthy contribution to strategic thinking by U.S. military officers. Service interests, unenlightened by a larger perspective, have tended to dominate the development of U.S. military policy. A major objective of the Goldwater-Nichols Act, as discussed in Chapter I, is to encourage a larger perspective on the part of the military officer corps. In this context, the strengthening of joint institutions and joint military advice (in contrast to narrower service viewpoints) is closely related to the panel's focus on how well the PME system is encouraging military officers to think strategically.

Does professional military education still nurture strategic thinkers? Does our military spend so much time studying tactics and weapons systems that there is no time for strategic thinking? A fundamental concern that contributed to the panel's focus on strategy is the perception that Hiroshima and Nagasaki marked not only the dawn of the nuclear era but also the beginning of a decline in the contribution of military officers to the development of U.S. strategy. With few exceptions, military officers have been absent from the ranks of prominent post-World War II strategic thinkers.

In this respect, the last 40 years differ from the more distant past. The United States has been blessed during its history with military leaders who were also outstanding strategic thinkers: the father of modern naval strategy, Admiral Alfred Thayer Mahan; the architect of victory during World War II, General George C. Marshall; and the man responsible for the theoretical basis of today's NATO strategy of flexible response, General Maxwell D. Taylor. Each of these officers made a profound and lasting contribution to national security by stimulating debate over U.S. strategy or by sound and imaginative strategic advice to American political leaders. As they matured professionally, these officers were given the opportunity and encouragement to think strategically.

The 1930s appear to have been a relative high-water mark for the education and development of military thought in the United States. Many retired officers interviewed by the panel pointed out that prior to World War II attendance at an intermediate or senior military school was considered a necessary tour of duty and even a reward. Many renowned World War II military leaders such as Eisenhower, Nimitz, Arnold, and Bradley attended a senior PME school. Admiral Halsey, who commanded the Central Pacific amphibious campaign against the Japanese, attended both the Army and the Navy war colleges. Subsequent assignment as a faculty member was highly prized duty reserved for only the very best officers. For example, General Marshall taught at the Army War College and was the Assistant Commandant of the Army Infantry School; Admiral King was the head of the post-graduate department at the Naval Academy.

The panel appreciates that the basic formulation of a national security strategy—of which military strategy is only one component—is essentially a political process. It firmly believes, however, that civilian leadership needs and should be able to draw upon military advice that is solidly grounded in an appreciation of overall U.S. national security goals.

#### WHAT IS STRATEGY?

Although an assessment of how our military education system develops strategists was a specific task of the panel, defining the term "strategy" was not. For the purposes of this report, however, it was necessary to define the term strategy as used by the panel.

Witnesses before the panel defined strategy in numerous ways, but there was a basic concept underlying each of their definitions: that strategy is the link that translates power into the achievement of objectives. For its purposes, the panel found it useful to dif-

ferentiate between two specific types of strategy—national *security* strategy and national *military* strategy—and between operational art and tactics.

Both national security strategy and national military strategy focus on the relationship between means and ends, but the former encompasses a wider range of factors. For purposes of this report, the panel adopted the Joint Chiefs of Staff definitions (JCS Publication 1.02) of military strategy and national strategy (which are referred to throughout the panel's report as national military strategy and national security strategy):

*National Military Strategy.* The art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force or the threat of force.

*National Security Strategy.* The art and science of developing and using the political, economic, and psychological powers of a nation, together with its armed forces, during peace and war, to secure national objectives.

As these definitions suggest, strategy encompasses the development of military capabilities that would be effective in preserving *peace*, during a *war*, and in an intermediate range of *crisis* situations. In other words, military strategy must address uses of the armed forces in peacetime to forestall war as well as the application of force during hostilities to achieve national security goals. As will be discussed later in this chapter, the panel believes that the distinction between national military and national security strategy has important implications for the PME system, one of whose goals is to encourage the development of strategic thinking.

Apart from national security and national military strategy, which the panel views as national-level endeavors, the panel also found it necessary to be specific about operational art, a concept also used in reference to the employment of armed forces and the achievement of objectives. JCS Pub. 1.02 contains no definition of operational art. The panel used the Army Field Manual (FM 100-5) definition:

*Operational Art.* The employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization and conduct of campaigns and major operations.

Operational art focuses on the employment of large military formations, larger than corps and normally from all the services. It is at the level of operational art that national military strategy is translated into the specific forces and employment plans needed to prevail in a campaign.

Tactics involve smaller military units—for example, an Army company or even an entire corps—and the achievement of specific battlefield objectives. Tactics, then—in contrast to operational art—focus on a narrower, more specific range of goals.

What is termed “operational art” today could be considered roughly equivalent to the 19th-century concept of strategy. As military forces grew in size and complexity and wars became global conflicts, the scope of what is meant by “military strategy” in-



creased. Nevertheless, the need to plan and develop doctrine for geographically defined theaters of war continued. That is now the province of operational art.

National security and national military strategy, operational art, and tactics all contribute to and are influenced by one another. For example, U.S. national military strategy must be affordable, must reflect arms control considerations, and must factor in alliance concerns and contributions—all issues that are of concern to military strategists *and* also to national security strategists, those who look at the military input as only one component of an overall national strategy. As a result of these types of interrelationships, the study of each of the above subjects cannot be neatly confined to one level of professional military education. But the area of concentration, the “center of gravity,” of the various PME levels should be focused on one subject, as discussed in Chapter I. Moreover, the 10 PME schools should be linked together by a conceptual framework in which any overlap is conscious rather than the result of unclear mission statements.

### ATTRIBUTES OF A STRATEGIST

Scholars have long remarked about the educational and professional diversity among innovative strategists such as Carl von Clausewitz, Alfred Mahan, Giulio Douhet, Bernard Brodie, and Herman Kahn.<sup>1</sup> Given this notable diversity, do strategists have any shared attributes? John Collins, a Senior Specialist in National Defense at the Library of Congress, has written that strategists, despite diverse backgrounds, generally do share a common set of attributes. Many of the characteristics he identifies were also mentioned by other witnesses and individuals interviewed by panel staff.

From the numerous attributes identified, the panel has distilled four characteristics—prerequisites, if you will—of the “ideal” strategist.

First, a true strategist must be *analytical*. He has to be able to move beyond isolated facts or competency in any given subject area to see and develop interrelationships.

Second, he must be *pragmatic*. The accelerated pace of change in today’s world, especially technological change, is self-evident. A true strategist is on top of emerging trends and aware of the need to constantly revalidate his strategic constructs.

Third, he must be *innovative*. Fashioning strategies is, after all, a creative process—one that frequently challenges the status quo.

Fourth, he must be *broadly educated*. Thinking strategically requires individuals who are generalists rather than specialists. Given the potential impact of many different subject areas on stra-

<sup>1</sup> Briefly, Clausewitz was a 19th-century Prussian military officer whose magnum opus, *On War*, analyzed and codified the methods of warfare; Mahan was a 19th-century American naval officer whose military career led him to the Naval War College where he wrote *The Influence of Sea Power upon History, 1660-1783*; Douhet was an early 20th-century Italian military officer who recognized the potential of air power; Bernard Brodie contributed to the first major academic work on nuclear strategy, *The Absolute Weapon*, published in 1946, and wrote the first influential textbook on the subject, *Strategy in the Missile Age*; Kahn was a contemporary political-military theorist and nuclear strategist who is perhaps best known for his book *On Thermonuclear War*.

tegic thinking—trends in political, technological, economic, scientific, and social issues, both domestic and international—strategists must have the broadest possible educational base.

Few officers possess all of these attributes. It is rare to find individuals capable of a high degree of conceptualization and innovation—the attributes that most distinguish the theoretical from the applied strategist. Fortunately, the objective of the PME system is *not* the creation of a *large* pool of military officers who are strategists on the order of a Mahan. In the view of the panel, only a small number of genuine theoretical strategists are needed. More officers, however, can and should become skilled in the application of strategy. As John Collins noted in his testimony before the panel:

Strategy, like science and technology, occupies two planes, one basic, the other applied. Theoreticians must feed fresh concepts to practical problem solvers, who otherwise would starve intellectually. The U.S. military education system should develop both.

Practical problem solvers—applied strategists—should be relatively easier to nurture and more numerous. A large number of the nearly 1,100 general and flag officers should be applied strategists.

Overall, the panel believes that it is within the capacity of the military education system to produce applied strategists and to identify and nurture theoretical strategists. Thus the goals of the PME system with respect to strategists should be two-fold: (1) to improve the quality of strategic thinking among senior military officers and (2) to encourage the development of a more limited number of bona fide theoretical strategists. The panel believes that these goals are realistic and achievable.

### DEVELOPING STRATEGISTS

In attempting to answer the question of how strategists are developed, the panel found it necessary to address four questions:

How important is education?

What type of education is relevant?

What are the roles of PME schools as compared to other institutions?

What type of faculty is needed?

The panel believes that the answers to each of these questions are important for optimizing the contribution of education to the development of strategists.

#### HOW IMPORTANT IS EDUCATION?

Panel witnesses identified three major components in the development of a strategist—talent, experience, and education. In the panel's view, the selection, assignment, and education systems need to be better coordinated in order to maximize the inherent synergy of these three factors. In addition, the work of the panel suggests that much more can be done to make PME relevant to the development of both strategic thought and strategists. Although the panel focused its effort on the educational component, a few comments on the relationship of the three components are in order.

Innate talent probably is the most fundamental component for the development of a strategist. Officers who are intelligent, imaginative, articulate, and interested in studying strategy must be identified as early as possible during their careers so that their development can be facilitated by appropriate personnel policies.

Talent alone is insufficient; it must be reinforced by both *appropriate* experience and *relevant* education. A former Army Chief of Staff told the panel that both assignments and schooling help to build on the natural abilities of potential strategists. The development of a strategist such as General George C. Marshall was, in his view, the result of Marshall's (1) being taught to think broadly and (2) taking the time to read extensively and reflect on that reading. In a similar vein, Admiral Bobby Inman, former Director of the National Security Agency, stressed that in addition to the academic foundation provided by the PME system, future strategists also need firsthand experience in how the real world works.

A later section in this chapter discusses how DOD can better capitalize on the experience factor. The remainder of this section addresses the panel's views on how education should contribute to the development of strategists.

#### RELEVANT EDUCATION AND THE ROLE OF PME SCHOOLS

The broad goals of the educational system that must nurture the development of strategic thinkers are closely related to the attributes of a strategist discussed earlier.

Both the constituent schools and the education system as a whole should emphasize analysis, foster critical examination, encourage creativity, and provide a progressively broader educational experience with each level of schooling building on the previous level. All students—regardless of whether or not they have the potential to think strategically or to develop into *bona fide* strategists—would benefit from this approach to education.

Beyond this broad generalization, what specific expertise should potential strategists be developing as they progress through various schools both within and outside of the PME system? The panel believes that there are three "building blocks" for strategists:

The first educational building block in the development of a strategist is a *firm grasp of an officer's own service, sister services, and joint commands*. To the extent such expertise can be obtained through education, it must be found in PME schools. Furthermore, officers seeking to develop their capacity for strategic analysis must remain professionally current, that is, keep up with the rapid pace of technological change. The panel recognizes that to some extent maintaining this currency competes with the education and experience required of a strategist. A retired general interviewed by the panel stressed that the complexity of today's weapons systems requires officers to spend more time both in the field and in school learning how to operate those systems. The panel firmly believes, however, that some officers are capable of becoming competent in their warfare skills *and* of developing the competencies required of a true strategist. For this reason, the panel believes that it is especially important to identify such officers as early as possible in their careers.

The second educational building block for strategists is a *clear understanding of tactics and operational art*. Knowledge in the employment of combat forces is a prerequisite to the development of national *military* strategy. Furthermore, those military strategists who can contribute to the formulation of national security strategy should also possess expertise in the various skills required to employ combat forces. Force employment is clearly a subject area that the PME system can make an important contribution to and, as will be recommended in Chapter IV, it should be the primary subject matter of PME schools.

The third educational building block is an *understanding of the relationship between the disciplines of history, international relations, political science, and economics*. Each of these disciplines is critical to the formulation of strategy.

*History*, or more specifically the lessons of history, provides insights into how nations have adapted their military and security strategies over time to deal with changing domestic and international environments. Strategy is, after all, dynamic. It must take into account changing realities and circumstances. Military history is especially important. The history of combat operations, including an understanding of why a commander chose a given alternative, is at the heart of education in strategy.

*International relations* provides an understanding of the framework in which both military and national security strategies must be developed. Worldwide political, economic, military, and social trends have a basic impact both on national goals and how a nation seeks to achieve them. Foreign area studies are also important; a strategist must be knowledgeable about both U.S. adversaries and allies and familiar with regions in which there is a potential for conflict.

*Political science* provides an understanding of the basic values of different societies and how they develop a consensus on goals. Such insights are critical if U.S. strategy is to influence successfully the policies of other nations. Specialties within political science, such as national security studies, are directly relevant to the development of strategists. Finally, conflicts between nations require an understanding of political objectives. The political dimension of conflict is particularly important with respect to low intensity conflict and terrorism, both of which frequently entail political responses.

*Economics*, including international economics, provides insights into how changes in growth and prosperity can affect national power. The soaring or plummeting value of the dollar, U.S. budget deficits, the emergence of Japan as an economic superpower, and the trauma caused by large increases in the price of oil are but a few examples of economic issues that can affect U.S. military strategy and national power. In any future large-scale conflict, the United States, no longer by itself the "arsenal of democracy," would need the help of its allies.

Together, these disciplines constitute related components of national security strategy. Although the panel is convinced that national security strategy from a military perspective should be the primary focus of the National War College or the proposed Nation-

al Center for Strategic Studies, potential strategists cannot wait until the end of their field grade years, when they would normally be selected to attend such a school, to begin developing a competency in these disciplines.

At what schools and at what point in the career of a potential strategist should competency in these disciplines be developed? The panel believes that if military officers are to contribute to the development of national military and national security strategy, they must look outside the PME system to develop competencies that PME schools cannot and should not be expected to impart.

Fortunately, the services already afford some officers the opportunity for educational development outside the formal PME system. For example, all of the services send selected officers to prestigious civilian graduate schools and encourage officers to accept Rhodes, Olmstead, and other scholarships. While in graduate school officers often study disciplines related to strategy such as history (including military history), political science, international relations, and economics. They are usually awarded master's degrees and a few receive doctorates. Admiral William J. Crowe, Jr., Chairman of the Joint Chiefs of Staff, who earned a Ph.D. from Princeton University, testified that officer participation in civilian education programs is beneficial and that, in his view, these programs should continue.

Original and independent strategic thinkers can be shaped and molded by a variety of educational experiences, but PME must be an important part of these diverse experiences. The first two educational building blocks for a strategist can be provided only by military schools. Education outside the PME system may be necessary for the development of strategists, but it should not be viewed as a substitute for professional military education. Retired Army General Andrew Goodpaster, who also received a doctorate from Princeton, expressed this view in stating that educational opportunities at civilian universities are very beneficial and should continue to be pursued, but not to the extent that the service and joint education programs suffer.

The panel also recognizes that there are several military education and research programs that both use and contribute to the development of strategy and military strategists. The Army's Strategic Studies Institute, the Navy's Strategic Studies Group, and the National Defense University's Strategic Concepts Development Center can be valuable programs. They allow small groups of individuals to concentrate on specific issues of strategic importance in a setting that is relatively free of the press of day-to-day business. The panel believes, however, that to ensure that only experienced and appropriately educated officers participate, these programs should be more selective. The goals are to encourage noteworthy contributions to strategic thinking and at the same time to further the development of potential strategists, not to reward competent officers without that potential.

Concerning the relevance and quality of contributions made by strategic study groups or similar programs, it is the panel's impression that their products have at times been insular and self-serving. Their value to national policymakers is limited because study results are seldom debated by an audience outside the sponsoring

service. One suggestion to overcome this insularity and make the products more relevant to policymakers would be to expose the products to scrutiny and debate. The panel recommends that the Chairman, JCS, sponsor a yearly conference, hosted by the National War College (or the National Center for Strategic Studies), to discuss the best individual studies on strategy and related subjects produced by the study groups, students, and faculties of the five senior colleges. The presence of key national security strategy decisionmakers at such a symposium would also help to stimulate a more relevant, higher quality product. See Chapter IV for additional discussion.

Finally, the panel recognizes that graduate-level education obtained at the Naval Postgraduate School or provided by private universities under the sponsorship of the Air Force Institute of Technology may also contribute to the education of strategists. The Naval Postgraduate School offers degrees in national security affairs and in other areas of study directly related to strategy such as international organizations and areas studies.

#### WHAT TYPE OF FACULTY IS NEEDED?

The nature and caliber of faculty are key to the development of strategic thinking and true strategists. The panel found that faculty quality at PME schools varies significantly and needs to be improved. Chapter V addresses this issue more comprehensively. It also identifies two restrictions on faculty compensation, both rooted in law, that are obstacles to improving the quality of faculty at PME schools. A few comments on the attributes of the faculty at the senior PME schools that focus on national military and national security strategy are provided here.

The panel's hearings suggest the faculty of such schools should consist of a select mix of civilian scholars, active duty military officers, and a few retired senior military commanders.

To ensure that students have access to the depth of knowledge that only a career of scholarship in a particular area can produce, respected civilian educators who are recognized experts in specific disciplines related to the teaching of strategy should be faculty members at senior schools. A retired four-star general told the panel that some long-term civilian faculty appointments are essential in order to improve pedagogy and depth of study. He added that the schools should only recruit recognized civilian educators. The panel agrees and considers it noteworthy that military as well as civilian witnesses concurred with this suggestion.

Active duty or retired military officers with actual experience in the strategic arena are also needed at senior PME schools that focus on strategy. Such officers can bring credibility and realism to the classroom and help students to relate their classroom work to current operational realities. These officers must be competent in their academic fields and have outstanding records in command and staff assignments.

In addition to civilian educators and mid-level active duty and retired military officers, the panel believes that a few carefully selected, retired three- and four-star officers could contribute significantly to the teaching of operational art, campaign analyses, national military strategy, and national security strategy. Some

senior officers have had extensive experience in these areas over many years of active duty and could contribute immeasurably to faculty expertise and credibility.

The panel recognizes that some schools, notably the Naval War College, already have a prestigious civilian faculty. In order to optimize student exposure to both academic insights and military realities, the college pairs a civilian professor with an experienced military officer in its strategy and policy seminars.

### STRATEGY INSTRUCTION AT PME SCHOOLS

Earlier portions of this chapter defined strategy, identified the attributes of strategists, and elaborated on the role of education in their development. This section assesses the adequacy of the existing strategy curricula at the five senior PME schools.

The panel's review of senior war college syllabi suggested that the curricula of each war college are not focused enough in general and not enough on strategy specifically. This conclusion is consistent with the testimony of a number of witnesses, including John Collins and Professor Williamson Murray, both of whom remarked on the lack of depth in the war college strategy curricula. Of course, breadth and depth are two sides of the same coin: the scope of a curriculum has a direct impact on its depth. Collins, a retired Army colonel and a national defense specialist at the Congressional Research Service, testified that:

Time is the critical constraint in multi-purpose U.S. military colleges, which must cover many subjects besides strategy during a 10-month academic year. The best they can hope for is breadth, but not depth. Every course is an introductory survey that allows little time to study strategic matters or current U.S. strategies, much less debate merits and compare alternatives. The National, Army, and Air War Colleges, in search of time, have long strained to stretch each academic day.

Similarly, Murray, a military history professor at Ohio State University's Mershon Center, told the panel that:

Except at Newport, the educational philosophy is one of teaching a little bit of everything that the war colleges think students should know: a little political science, a little area studies, a little management, a little about the Soviet military, a little about the American military, a little bit about strategy, a little bit about organizational behavior, the list goes on and on. This is very much the Pecos River approach—a mile wide and an inch deep. Unfortunately there is little time available at the war colleges and if one wants to teach the students something about war—the most complex and difficult endeavor in which human beings engage—one must make hard choices regarding curriculum.

As noted earlier, the panel believes that one fundamental reason for these deficiencies is lack of an explicit focus at each level of professional schooling within the current PME system. Sharpening the focus at PME schools would permit those subjects that remain

in the curricula to be addressed in greater depth. The panel recommends that the schools be focused as follows:

*National War College* (or the proposed National Center for Strategic Studies)—national security strategy.

*Service War Colleges*—national military strategy.

*Intermediate Schools*—operational art with an introduction to military strategy.

Using the JCS definitions of national military and national security strategy provided earlier and the above framework as its criteria, the panel analyzed the degree to which each of the five senior PME schools addresses strategy. More specifically, the panel estimated the number of classroom hours in the core curricula devoted to the study of both national military and national security strategy. It did so by reviewing the syllabus of every core course at each college and counting seminar, lecture, exercise, and symposium hours. The panel took a "strict constructionist" approach to determining what subjects and activities would be considered strategic studies under the definitions.<sup>2</sup> The panel recognizes that its methodology does not capture time spent outside the classroom reading, conducting research, and preparing papers; nor does it take into account pedagogical differences that affect the quality of education at each of the various colleges.

The analysis led to the following observations about the four war colleges and the Industrial College of the Armed Forces:

(1) The treatment of national *military strategy* at the three service war colleges represents only about one-quarter to one-third of the core curriculum classroom hours at each school. A significant amount of the remaining time at the Army and Air War Colleges is devoted to area studies and decision-making processes. The Naval War College spends most of its remaining time on national security decision-making and joint operations.

(2) Of the five schools, the National War College devotes the most extensive portion of its core curriculum to *strategy overall*, that is, both national military and national security strategy. However, the former receives substantially more emphasis and time.

(3) ICAF devotes as much time as any service war college to strategy overall. But, while it treats national security strategy extensively, it devotes little time to national military strategy.

These general observations, when measured against the conceptual framework outlined at the beginning of this section, suggest that several significant changes are needed in how our war colleges teach strategy.

*Service War Colleges.* The panel recommends that the service war colleges explicitly make national *military strategy* their primary focus and increase the amount of time spent on this subject. This focus is consistent with another panel recommendation that the

<sup>2</sup> The panel consciously excluded area studies and decision-making systems/processes—subjects that account for significant portions of the curricula at several colleges. In addition, courses that ostensibly dealt with military strategy but that on further examination appeared to focus primarily on the operational level of war were also excluded. Strategy and operational art do overlap, but they are different subjects, as discussed earlier in this chapter.



primary study of the operational level of war should occur earlier in an officer's career—at the intermediate level of education.

The Army and Air Force are already placing greater emphasis on the operational level of war in their command and staff college (intermediate-level) programs. As graduates of improved operational art programs reach them, the Army and Air Force war colleges will be able to convert time now spent on operational art to the study of national military strategy. For the Navy, this recommendation involves shifting more effort from national security decision-making and from joint theater operations to the strategy course at the senior-level College of Naval Warfare. Correspondingly, the operational level of war—principally joint operations—would be emphasized at the intermediate-level Naval Command and Staff College by decreasing the amount of time devoted to national military strategy and national security decision-making.

Although not prepared at this time to recommend a specific percentage, the panel strongly recommends that each service war college gradually but significantly increase the portion of its curriculum devoted to national military strategy.

*National War College.* As the service war colleges significantly increase their focus on national military strategy, the National War College should decrease the amount of time devoted to national military strategy and become a center for the study of national security strategy. If the military students were graduates of service war colleges, they would have a good understanding of national military strategy and be able to focus on the integration of military power with the nonmilitary elements of national power.

*Industrial College of the Armed Forces.* In the panel's view, the ICAF curriculum currently devotes an appropriate amount of time to strategy but needs to establish a better balance between national military and national security strategy. Currently, the ICAF mission includes mobilization planning, acquisition policy, and joint logistic planning. The first two subject areas are closely related to national security strategy while joint logistic planning is an element of national military strategy. As noted earlier, however, the panel's analysis revealed that ICAF currently devotes relatively little time to national military strategy. The Chairman, JCS, has initiated a review of the ICAF mission. Whatever the outcome of that study, the strategy focus should be more closely aligned with the college mission than it currently is.

## PROPOSED NATIONAL CENTER FOR STRATEGIC STUDIES

The panel strongly supports the proposal of Admiral William J. Crowe, Jr., Chairman, JCS, advanced during his testimony before the panel. Admiral Crowe suggested that a National Center for Strategic Studies be established at Fort McNair in Washington, D.C., where selected senior military officers, high-level government officials, congressional staff members, and private sector media, labor, industry and other leaders could be brought together to research and study national strategy. The center would be made up of four components: a revamped National War College with its year-long program of study adapted to focus on national security strategy and to accommodate a smaller number of more senior,

highly select officers; a "think-tank" for the study and formulation of national security and national military strategy; the Capstone course; and an institute for conducting seminars, symposiums, and workshops in strategy for both the public and private sectors.

Currently, formal study in PME schools ends at the war college level—at the rank of colonel/Navy captain. The only significant, formal education program above that level is the Capstone course, which new flag and general officers (with some few exceptions) are required by law to attend. Capstone does not focus on strategy; rather it is a 6-week familiarization course on the services, the unified and specified commands, and the Joint Staff. The panel believes that it should also address strategy.

#### IDEAS FOR A NATIONAL CENTER

The French senior-level schools, which the panel visited, provide some excellent insights into how the National Center proposed by Admiral Crowe might be structured. After World War II the French, realizing that modern war is primarily joint, combined their three senior-service schools into a Center for Higher Military Studies (CHEM), nicknamed the "School for Field Marshals." Each year about 20 colonels/Navy captains attend CHEM for about 10 months to concentrate on national and defense policy and strategy. It is rare that a graduate of CHEM is not promoted to general officer, although not all French generals are graduates of CHEM.

Allied with the CHEM is the Institute for Higher Studies of National Defense (IHEDN). It is comprised of a student body of one-third high-level civil servants, one-third executives from industry, and one-third military officers (the student body of CHEM). IHEDN combines these groups in six seminars that meet 3 half-days each week. The seminars conduct multi-discipline studies of national security policy and strategy issues. The groups also tour military and industrial sites within France and travel overseas.

A national center utilizing the French ideas for a smaller, highly select, and more senior student body with part-time participation from the private sector has great potential. Panel proposals on the National Center involve both jointness and strategy issues and are addressed in Chapter IV. Specific strategy study and research issues are discussed below.

#### COURSE OF STUDY

During the panel hearing at the Naval War College, Rep. Skelton requested that Professor Alvin H. Bernstein, Chairman of the Strategy Department, propose a course of study for future flag and general officers to develop their capacity for strategic thought. The panel believes that Professor Bernstein's response deserves consideration as the conceptual framework for the study of strategy at the National Center's revamped National War College. Moreover, a shorter, more concentrated version should be taught as a part of the Capstone course.

Professor Bernstein's proposal would "require students to formulate strategies of their own, in preparation for the time when they may be involved in strategy making in the real world." His program is divided into three phases that seek "progressively to . . .

increase the ability of the officers to formulate appropriate strategies."

*Phase 1, "How to Think About Strategy"*: officers will read and write papers about the works which present alternative ways of analyzing the proper relationship between military means and political goals. Clausewitz, Sun Tzu, the academic students of deterrence theory, systems analysts, and business planners have all offered ways to look at the problem of relating available means to longer term objectives. None have provided a completely satisfactory answer, but taken together, they offer a range of intellectual approaches for thinking about strategy which the officers can evaluate and use.

*Phase 2, "Case Studies in Making Strategy"*: officers will be presented with specially written case studies focusing on modern problems in strategic choice. To the extent possible, the case studies will present original documents and evidence that were actually available to the contemporary decision makers as they faced national security problems and tried to develop adequate responses, so that the real intellectual difficulties and limits facing the makers of strategy are recreated.

*Phase 3, "Strategies for the Future"*: officers will be presented with a statement of American political goals and a specific challenge to it in a functional or geographic theater that may actually occur over the next ten to twenty years. They will then be asked to develop a long term strategy for handling that problem. The officers should be broken down into smaller, inter-service groups and, if possible, the assignment of officer to problem should reflect both past experience and future posting.

The panel believes that students in the national strategy center should follow a rigorous, challenging, advanced course of study. Course materials and faculty presentations should be based on the assumption that military officer students arrive with a solid background in political-military history and national military strategy. This background must be learned at the service war colleges, in fellows programs, or in civilian institutions that offer degrees in political-military disciplines.

#### STRATEGY-RELATED STUDIES

In addition to providing higher education in strategic studies and related subjects, the mission of the center should be to conduct strategy-related studies for the Chairman, JCS, the Secretary of Defense, and other senior executive branch officials. The panel agrees with Admiral Crowe that the center should devote attention to:

. . . such challenges as how to protect U.S. interests without leading the nation into war, without paying tribute to the world's troublemakers, and without an open-ended erosion of national wealth. Such concerns are at the

heart of national security policy formulation and implementation.

Research should focus at the national level and include the economic, military, and political elements of national power in peacetime, crisis, and war.

Seminar groups made up of civilians and officers from different services can contribute to "think tank" studies for the Chairman, JCS, and others. Seminar assignment considerations should include an officer's past experience and future assignment prospects. Similarly, civilian participants should be divided among the seminar groups, with consideration given to their backgrounds and likely future responsibilities. Early in the course, participants could organize, formulate, and start to develop and research their studies. During periods when the part-time civilians are away from school, the full-time students could continue to work individually on assigned parts of the study. An alternative would be to have them communicate with their classmates by phone and possibly computer link. (A system for linking war college cohorts was proposed to the panel by a retired general officer.)

Besides having the strategy school seminar groups contribute to the think tank research, the panel recommends that the Chairman consider the formulation of a Joint Strategic Studies Group (JSSG) at Ft. McNair using the best aspects of the Navy's Strategic Studies Group (SSG) at Newport, Rhode Island, and the Army's Strategic Studies Institute at Carlisle Barracks, Pennsylvania. A JSSG could employ a small number of colonels and brigadier generals (and their equivalents) who would study and research a strategic issue of specific interest to the Chairman, JCS, and report directly to him. Officers selected should (1) have outstanding military performance records in both operational and staff assignments, (2) be graduates of senior PME institutions or comparable programs, and (3) have proven intellectual capacity in the area of strategy. An alternative method of selection would be to have each war college nominate two or three top students to spend the year following graduation at the JSSG (a method similar to the way the Army selects officers for its School of Advanced Military Studies). Assignment to the JSSG should count as a joint duty assignment. Reassignment at the end of an officer's JSSG tour should be to important strategy or operations and plans billets on a joint or equivalent staff. The JSSG and the best elements of NDU's existing Institute for National Strategic Studies (INSS) could be used as early steps in establishing the research portion of the National Center for Strategic Studies.

#### EXECUTIVE COURSES

The panel also agrees with Admiral Crowe's suggestion that, in addition to its primary educational and research efforts, the National Center should offer a number of short, directed courses for senior flag and general officers and senior government officials. These courses could be modeled after similar ones offered to senior Army officers at the Army War College and to senior executives at Harvard, Massachusetts Institute of Technology, and other educational institutions. For example, a course for senior officers being

assigned to NATO would acquaint them with the issues and organizations they will encounter. The courses should be available to all similarly assigned senior officers and should be taught from a joint perspective. At the Air University, the Air Force and Army jointly administer a series of war games for two- and three-star officers of all services that could also serve as a model for National Center exercises involving even broader participation and focusing on national military and national security strategy.

#### MANAGING A SCARCE RESOURCE: STRATEGIC THINKERS

A defense establishment that seeks to encourage the development of strategists must ensure that this scarce national resource is used in the most effective manner possible. Currently, only two service personnel systems—the Army's and the Navy's—specifically identify officers who have educational experience in the area of strategy. And only the Navy has a system for monitoring and assigning officers to strategy billets. Both the Air Force and Marine Corps personnel systems consider assignments on the basis of experience and a review of personnel records, but neither specifically tracks and assigns officers based on strategy-related education or experience.

##### NAVY

In addition to a primary warfare specialty, such as aviation or submarines, Navy officers can also have a subspecialty, such as strategy. Recognition as a subspecialist is based upon:

- education, such as a master's degree in a strategy-related discipline; or
- experience, for example, having served in a strategy-related staff position such as the Strategy and Concepts Branch of the Deputy Chief of Naval Operations (Plans, Policy and Operations); or
- a combination of both education and experience, which requires a board review of the officer's academic credentials and job performance in a strategy-related assignment.

Overall, the Navy has approximately 120 officers who have been awarded one of these three types of strategy subspecialties. Once an officer has been designated a strategy subspecialist, subsequent billet assignments must be approved by a subspecialty coordinator. This procedure ensures that subspecialists are used to the maximum extent possible in their field of expertise. Navy strategy subspecialists can expect assignments on the staff of the Chief of Naval Operations (Plans, Policy, and Operations); on fleet or unified command staffs; in strategy or policy positions on the Joint Staff or in the Office of the Secretary of Defense; or on the staff of the National Security Council.

##### ARMY

The Army also recognizes expertise in the area of strategy by assigning a skill identifier (similar to the Navy's subspecialties) to certain qualified officers. As in the Navy, the strategy skill identifier

er is in addition to a primary (such as infantry or aviation) and an alternate (such as personnel or operations) specialty. The Army assigns a strategy skill identifier based on either:

—a master's degree in a social science and completion of the Army Command and General Staff (ACGS) School in residence, with directed elective courses in the strategy area, or

—a master's degree in a social science, completion of any intermediate-level service or joint school (other than ACGS), and 12 months of duty in a strategy-designated billet together with a recommendation from the officer's supervisor.

Surprisingly, the Army has no formal program for career monitoring of officers with the strategy skill identifier to ensure that they are considered for strategy billets upon reassignment.

#### PANEL CONCLUSION ON MANAGING STRATEGISTS

The panel believes that each service should have a personnel management system to develop, monitor, and assign officers to service and joint billets that would benefit from an officer with expertise in strategy. The Chairman, JCS, should ensure that the need of joint, departmental, and national-level organizations for strategists is met. Positions requiring strategists should be so designated on the joint duty assignment list—including some critical joint duty assignment positions.<sup>3</sup> Concomitantly, the manning of key strategy positions should be closely monitored. Finally, there should be a conscious effort to develop and designate JSO strategists who would function primarily at the national, departmental, and Joint Staff level. They should be among the best military thinkers and planners available to the President, Secretary of Defense, and the Chairman, JCS. Their service and joint experience, coupled with advanced education, should prepare them to occupy important positions on the National Security Council staff, at the State Department, in the Office of the Secretary of Defense, and on the Joint Staff.

#### RECOMMENDATIONS

1. The military department selection, assignment, and education systems need to be better coordinated in order to optimize the development of strategists. The three major components in their development—talent, experience, and education—require careful attention by the personnel systems.

2. Two educational building blocks in the development of a strategist—knowledge of an officer's own service, sister services, and joint commands and understanding of tactics and operational art—can be provided only by military schools. If military officers are to contribute to the development of national military and security strategy, however, they must look outside the PME system to de-

<sup>3</sup> Title IV of Goldwater-Nichols requires that 1,000 joint duty assignment positions be earmarked as "critical" and filled only by joint educated officers with previous joint duty experience; such officers are referred to in the law as "joint specialists." See Chapter III for a more detailed explanation.

velop competencies that PME schools cannot and should not be expected to impart. Education outside the PME system, although necessary, should not be viewed as a substitute for professional military education.

3. A National Center for Strategic Studies, as proposed by the Chairman, JCS, should be established. This recommendation is discussed more fully in Chapter IV.

4. The revamped National War College (or the proposed National Center for Strategic Studies) should focus on national *security* strategy. The service war colleges should make national *military* strategy their primary focus and gradually but significantly increase the portion of their curriculum devoted to that subject.

5. The faculty teaching strategy should consist of civilian educators, active duty and retired military specialists, and former senior military officers. To ensure that students have access to the depth of knowledge that only a career of scholarship in a particular area can produce, respected civilian educators who are recognized experts in specific disciplines related to the teaching of strategy should be faculty members at senior schools. Active duty and retired military officers with actual experience in the strategic arena are also needed for strategy instruction. Finally, a few carefully selected retired three- and four-star officers can contribute significantly to the teaching of operational art, campaign analyses, national military strategy, and national security strategy.

6. The Chairman, JCS, should sponsor a yearly conference, hosted by the revamped National War College (or the National Center for Strategic Studies), to discuss the best individual studies on strategy and related subjects produced by study groups, students, and faculties of the five senior PME colleges as well as other military and civilian strategic thinkers. Chapter IV contains further discussion of this recommendation.

7. Each service should have a personnel management system to develop, monitor, and assign officers to service and joint billets that would benefit from an officer with an expertise in strategy. The Chairman, JCS, should ensure that the needs of joint, departmental, and national-level organizations for strategists are met. Positions requiring strategists should be so designated on the joint duty assignment list—including some critical joint duty assignment positions. Concomitantly, the manning of key strategy positions should be closely monitored. Finally, there should be a conscious effort to develop and designate JSO strategists who would function primarily at the national, departmental, and joint staff levels. They should be among the best military thinkers and planners available to the President, Secretary of Defense, and the Chairman, JCS.

## CHAPTER III—AN EXPANDED ROLE FOR JOINT EDUCATION

Passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986 marked a watershed for professional military education (PME). The act attaches added significance to PME schools by specifically assigning them the principal role in joint education—a role that Congress considers crucial to improving the performance of joint institutions. What do these new joint education responsibilities portend for the military school system? What are the implications of educating “joint specialty” and other officers in “joint matters”? What, in fact, do these terms mean in the context of existing PME? How can the military schools fulfill the goal, implicit in the Goldwater-Nichols Act, that the panel is chartered to examine: to assure that PME “provides the proper linkage between service competent officers and the competent joint officer”?

In order to answer these and related questions the panel first sought to gain an understanding of (1) how the existing PME school system handles joint education and (2) the provisions of the Goldwater-Nichols Act that might necessitate altering the existing approach to teaching joint subjects. Thus, the chapter begins with a review of the way the joint PME system developed after World War II and then examines the intent of the joint officer management provisions of title IV of the Goldwater-Nichols Act. Because of the sparseness of the legislative language, the panel next found it necessary to develop a more detailed portrait of the joint specialist. The panel then presents the results of its examinations: conclusions concerning the requirements for educating joint specialists and other officers in joint matters. These requirements in turn allow the panel, at the close of this chapter, to assess the performance of the existing military school system with respect to joint education and thus set the stage for an examination in Chapter IV of alternatives for modifying the system.

### EVOLUTION OF JOINT AND OTHER PME SCHOOLS SINCE WORLD WAR II

The War and Navy Departments each entered World War II with a war college and several intermediate schools for various types of warfare—land, air, sea, and amphibious. There were no joint schools, that is, “multi-service” schools with faculties and student bodies from each service devoted to the study of integrated land, sea, and air operations. Wartime experience soon changed that.

In April 1943, the Joint Chiefs of Staff (JCS), at the recommendation of General Henry H. Arnold, created the Army-Navy Staff Col-



lege (ANSCOL). In the middle of a world war, even with the services continuing to operate their own intermediate schools on a reduced scale, the Joint Chiefs found it necessary to take the time and allocate the resources to establish another school. They took action because the country badly needed senior officers with the knowledge and skills to employ joint forces in a theater command and service schools were not meeting that demand. The stated view of the JCS was that:

. . . one of the lessons learned from early joint operations of the war was that there were insufficient officers who had an adequate comprehension of the capabilities and limitations of all of the armed forces to properly plan and command such joint operations.

ANSCOL, a 4½-month school, graduated about 30 Army and Navy students (including aviators from each service) per session beginning in December 1943 for the duration of the war. State Department officers have been a part of the student body since 1944. The short, intense course, taught by a faculty composed of Army and Navy personnel, concentrated on three illustrative joint force case studies designed to give the students an understanding of the capabilities and methods of each service and improve their ability to determine the "most effective unified employment of all arms and services. . . ."

The ANSCOL precedent carried over into the post-World War II period. Studies of postwar education established requirements for (1) increased exchanges of officers both as students in other-service schools and to exchange duty in other-service assignments; (2) a joint war college focusing on military strategy and war planning; (3) continuing the Army Industrial College created in 1924; and (4) a Director for Military Education at the JCS level. In deference to these joint plans, which he strongly supported, the Army Chief of Staff, General Eisenhower, did not reconvene the Army War College in 1947. In fact, he provided the facilities at Fort McNair, previously used by the Army War College, for use by the new joint school. Justification for a joint war college was based upon the view that:

Common indoctrination cannot be provided at a high level college conducted by any one component, since each will be engaged primarily in its own field. No one component has paramount interest in joint action, and the doctrines and teachings of one component should not be permitted to predominate in the formulation of common doctrines. A joint institution, in which all components have equal interests, is essential. (JCS 962/2; June 22, 1945; Annex D to Appendix A.)

Acting on their conclusions about lessons learned in World War II, the Joint Chiefs of Staff approved the establishment, under sponsorship with the State Department, of a National War College on July 1, 1946. The college was charged with preparing students for the "exercise of joint high-level policy, command and staff functions, and for the performance of strategic planning duties. . . ." Over the years, the mission has evolved to include the "study of

national security policy and strategy formulation and implementation" and "application of military power," focusing on "national strategy" and "a joint multi-service perspective." Gradually adding students from other parts of the Government, the National War College has facilitated a better understanding of all the agencies that would be called upon to contribute to a war effort. Thus the distinguishing characteristic of the National War College, as compared to the service war colleges, is its emphasis on the broader aspects of strategy, the orchestration of all elements of national power to achieve national objectives.

The Under Secretary of War and the Assistant Secretary of the Navy approved conversion of the Army Industrial College to the Industrial College of the Armed Forces (ICAF) on April 11, 1946. The Armed Forces Staff College (AFSC) was established as a joint school for intermediate PME on August 13, 1946. As chartered by the JCS, AFSC "would perform the same role in the joint educational arena as the Command and Staff Schools of the services."

Having given up its facilities at Fort McNair for the National War College, the Army reestablished its war college in 1950 at Fort Leavenworth, Kansas. In the following year it moved to Carlisle Barracks, Pennsylvania. The Air War College began its first academic year in 1946 at Maxwell Air Force Base in Alabama. The Naval War College had remained open throughout World War II, at least to offer short-term courses at the intermediate level.

During the initial postwar years, officers generally attended one of the joint schools following graduation from their corresponding service school. By the early 1950s, however, that pattern had begun to change, and, for many, attendance at joint schools became a substitute for service schools. By 1963, few officers were attending both a service war college and the National War College or Industrial College. It was claimed that time had become too precious in senior officers' careers and curricula in the service and joint colleges had converged too much to warrant 2 years of education at this level. At the intermediate level, it was not until about 1968 that officers from the Army and Marine Corps stopped attending AFSC after their service staff college. One retired Army four-star general lamented this change during a panel interview. He cited the value of bringing together to study joint operations Army and Marine Corps officers who were already thoroughly familiar with their own service doctrines and the principles for employing large units in war.

Charts III-1 to III-3 illustrate the shift in hierarchy and sequence of schooling within the military education system from 1946 to 1988.

## CHART III-1

## PME 1946

Professional  
Level

3rd

Industrial  
College of  
The Armed  
Forces

Armed  
Forces  
Staff  
College

National  
War  
College

2nd

Marine Corps Command and Staff College	Army Command & General Staff College	Air Command and Staff College	Navy Command and Staff College
1st Marine Corps Amphibious Schools	Army Branch Schools	Air Force Squadron Officers School	Navy Schools for Surface, Submarine or Aviation

## CHART III-2

## PME 1950

Professional  
Level

4th

National  
War  
College

3rd

Armed  
Forces  
Staff  
CollegeIndustrial  
College of  
The Armed  
ForcesArmy  
War  
CollegeAir  
War  
CollegeCollege  
of  
Naval  
Warfare

2nd

Marine  
Corps  
Command  
and Staff  
CollegeArmy  
Command  
& General  
Staff  
CollegeAir  
Command  
and  
Staff  
CollegeNavy  
Command  
and Staff  
College

1st

Marine  
Corps  
Amphibious  
SchoolsArmy  
Branch  
SchoolsAir Force  
Squadron  
Officers  
SchoolNavy  
Schools for  
Surface,  
Submarine  
or Aviation

## CHART III-3

## PME 1960s to Present

Professional  
Level

3rd	National War College	Industrial College of The Armed Forces	Army War College	Air War College	College of Naval Warfare
2nd	Armed Forces Staff College	Marine Corps Command and Staff College	Army Command & General Staff College	Air Command and Staff College	Navy Command and Staff College
1st		Marine Corps Amphibious Schools	Army Branch Schools	Air Force Squadron Officers School	Navy Schools for Surface, Submarine or Aviation

In June 1975 the Department of Defense Committee on Excellence in Education, commonly referred to as the Clements Committee, noted the convergence of curricula in PME schools. The committee's criticism of the senior schools was that:

. . . in spite of a degree of individual focus inherent in each college by virtue of its title and the vernacular of its subjects, the depth and concentration actually devoted to each particular field is not on a level requisite for national educational institutions devoted to excellence in these fields. To the extent that criticism is valid, the Committee considers the appropriate response to be a sharpening of focus and a deepening of true expertise in the avowed mission fields.

The Clements Committee felt that to justify five separate senior colleges each service college should have a specific "mission field." The committee recommended that each college curriculum, therefore, have three components: a common core, mission-specific courses, and an elective program tailored to the individual needs of its students. The education system as a whole would be composed of complementary programs with each school having both a common core and a sharper service mission focus. Each college mission would be refined—the Army War College would focus on land warfare; the Naval War College on naval warfare; the Air War College on aerospace warfare; the Industrial College of the Armed Forces on defense management and materiel acquisition; and the National War College on national security policy formulation. Schools would not focus narrowly on single-service issues, but deal with the full range of issues in their specific mission areas. The Clements Committee acknowledged that the services were treating attendance at the joint colleges as not "fundamentally different from attendance at the Service war colleges." To resolve this problem, students would be assigned to schools according to a "through assignment" process, meaning that attendance at a particular school would relate directly to the officer's next duty assignment. Thus, Clements envisioned a system comprised of five coequal intermediate schools and five coequal senior schools, each with a distinct mission and faculty and an appropriately oriented student body.

The structure of the professional military school system as modified in the aftermath of the Clements Report is essentially the system that existed when the Goldwater-Nichols Act was passed and that remains as of the publication of this report.<sup>1</sup> The National War College has increased the portion of its curriculum devoted to joint operations and strategy while continuing its traditional political-military concentration. The service war colleges have increased their emphasis on national security policy and strategy. Even though an entirely different educational experience (of approximately half the length of the other schools), the Armed Forces Staff College is credited by the services as equivalent to attendance at a service intermediate school. As recognized by the Clements

<sup>1</sup> The National Defense University added a Capstone course for general officers in 1983. It is discussed in the last section of this chapter and elsewhere in this report.

report, the 10 PME schools are arrayed in a two-tier configuration in which all schools are coequal with the others on their level rather than the structure established after World War II in which the joint schools held a distinctive—and, in many respects, preeminent—position.

Are modifications of the existing PME system necessary to fulfill the additional responsibilities Congress levied in 1986? The following section takes the next step toward answering this question. It examines the joint officer management policies of title IV of the Goldwater-Nichols Act and their implications for professional military education. The panel's conclusion after its review of the evolution of PME since World War II, however, is that a return to historical roots is indicated. The Goldwater-Nichols Act, with its emphasis on the imperatives of joint warfare and the consequent strengthening of joint institutions, demands a reappraisal of the direction in which professional military education has evolved. What World War II military leaders learned from that war about how to structure military education is more consistent with the demands of the Goldwater-Nichols Act than the PME system today.

#### TITLE IV OF THE GOLDWATER-NICHOLS ACT

Title IV is the statutory basis for improving the performance of officers in joint assignments. It calls for personnel management policies that would meet three goals: (1) select more talented (quality) officers for joint duty assignments, (2) increase the joint experience level of officers in joint assignments, and (3) educate them appropriately.

To accomplish these goals, the act mandates a number of new personnel policies—tying promotions, assignments, and education to joint duty—that affect all officers and requires the Secretary of Defense to establish a new category of officer, called the Joint Specialty Officer (JSO). JSOs are to be particularly trained in, and oriented towards, joint matters.

In the JSO, Congress created a category that attempts to combine the best elements of both the pre-1986 system and a general staff system. The pre-1986 system had many officers who served no (or only one) joint tour and had no joint education. Although these officers may have been expert in their service, Congress believed that they were not expert and current in joint matters. In the commonly held concept of a general staff system, however, after a certain point in their careers, general staff officers would seldom return to their services. According to critics, general staff officers would, as a consequence, cease to be current and expert in their service. With the JSO, Congress created an officer who would serve a mix of service and joint tours and also be appropriately educated. Thus, a JSO would remain current and effective in both areas.<sup>2</sup>

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<sup>2</sup> The clearest example of congressional intent to have current service operational experience is in the provision for Critical Occupational Specialists (COS), warfighters, to have joint tours only 2 years long so they could return to their service more quickly than the standard 3-year tour.

## PRINCIPAL JOINT PERSONNEL POLICIES

The major Goldwater-Nichols Act policies for achieving the *quality* goal require that: (1) the Secretary of Defense establish qualifications for JSOs, (2) JSO promotion rates not be less than the rate for officers on service headquarters staffs, (3) JSOs (or JSO nominees) make up approximately half of the joint duty assignment (JDA) list, and (4) all officers selected for promotion to flag or general officer must have served in a joint duty assignment.

The major policies for obtaining the *experience* goal require that: (1) prospective JSOs successfully complete a full tour in a joint duty assignment, (2) at least 1,000 JDA billets be designated as critical billets to be filled by officers who have previously completed a joint tour and are thus JSOs, and (3) officers serve specified tour lengths for joint duty assignments. JDA tour lengths, after 1988 amendments to the law, are 2 years for general and flag officers and 3 years for other officers.

The major policies for achieving the *education* goal are to: (1) strengthen joint education for all officers; (2) require that JSOs successfully complete joint education at a joint PME school before a joint duty assignment; and (3) require all new flag and general officers to attend Capstone, a course "to prepare them to work with the other armed forces."

## IMPLEMENTATION OF EDUCATION GOALS

Section 663, "Education," of title IV<sup>3</sup> identifies two types of joint education to implement the first two education policies.

The first type is joint education in *service* PME schools. Title IV requires a strengthened focus on joint matters and on preparation for joint duty assignments. This education is for *all* officers in service schools whether or not they will be subsequently assigned within their own service or to a joint position. This constitutes joint education from a *service perspective*.

The second type is joint education in *joint* PME schools. Congress expected that joint education would continue to be provided by the three National Defense University (NDU) joint colleges (National War College, Industrial College of the Armed Forces, and the Armed Forces Staff College). Here title IV requires enhanced education on joint matters, to "rigorous standards," for JSOs. This constitutes joint education from a *joint perspective*.

In the past, the percentage of NDU graduates going to joint duty assignments had often been low. To correct this, title IV requires that more than 50 percent of joint PME school graduates go to

<sup>3</sup> Section 663 language:

*JOINT MILITARY EDUCATION SCHOOLS.*—The Secretary of Defense, with the advice and assistance of the Chairman of the Joint Chiefs of Staff, shall periodically review and revise the curriculum of each school of the *National Defense University* (and of any other joint professional military education school) to enhance the education and training of officers in joint matters. The Secretary shall require such schools to maintain rigorous standards for the military education of officers with the *joint specialty*.

*OTHER PROFESSIONAL MILITARY EDUCATION SCHOOLS.*—The Secretary of Defense shall require that each Department of Defense school concerned with professional military education periodically review and revise its curriculum for senior and intermediate grade officers in order to strengthen the focus on—

(1) joint matters; and  
(2) preparing officers for joint duty assignments."  
(Italics added for emphasis.)



joint assignments. In addition, the act requires that each JSO who graduates from a joint PME school shall go to a joint assignment.

Finally, title IV requires sequential development of JSOs. Officers first go to joint education; they then serve in a joint assignment as a JSO nominee. After successfully completing a full joint tour, they can then be selected as a JSO. Under certain limits, the Secretary of Defense can waive the required sequence (joint PME, then joint duty) or waive joint PME, if the officer has completed two full joint tours.

In summary, title IV seeks to improve the performance of officers in joint assignments by improvements in three areas—talent (quality), experience, and education. The panel was repeatedly told that more talented officers are now going to joint assignments. The improved performance that title IV seeks is not, however, based solely on talent; it is also based on joint education and joint experience. With a rigorous education obtained in both service and joint schools, multiple joint duty tours, and a recognition within the officer corps of the validity of the joint approach, joint specialists will develop over time into a valuable pool of experts on the integrated employment of armed forces.

In order to arrive at judgments about joint education, the panel found that it needed a clearer picture of the new student—the Joint Specialty Officer (JSO). In title IV, Congress provides only enough information for a sketch of the JSO. It purposely left to defense officials the task of completing the canvas. In the next section the panel seeks a more complete portrait of the JSO.

### THE JOINT SPECIALTY OFFICER

What are the characteristics of the Joint Specialty Officer? That question has not been answered, the panel was disappointed to learn, fully 2 years after the passage of the Goldwater-Nichols Act. The act makes the Secretary of Defense, with the advice of the Chairman, JCS, responsible for defining career guidelines for joint specialists. The guidelines subsequently established by the Secretary of Defense, however, do not set out the specific qualities, prerequisites, and career expectations of the joint specialist. Nor are these specifics found elsewhere in the Department of Defense. As a result of the lack of a common understanding, the panel had significant difficulty in discussing joint education with college officials, witnesses, and other experts.

The panel found that it could not proceed to an assessment of the requirements for joint education without first arriving at its own understanding of the joint specialty. Parenthetically, the panel is convinced that defining the JSO is the crux of the problem posed for the Department of Defense by all of the new title IV joint officer personnel policies. Hard thinking needs to be done to come to grips with this issue. When it is resolved, DOD will have a much clearer idea of how to meet the legislative requirements of title IV.

The following portrait of the JSO was developed by the panel based on testimony, interviews, and a review of the legislation.

## WARRIOR AND STAFF OFFICER

The Goldwater-Nichols Act redistributes authority and responsibility within the Department of Defense. Establishment of the joint specialty to improve the support available to senior joint military commanders and top civilian officials is one of the methods the act employs to cement the changes.

An April 1982 report prepared for the Chairman, JCS, recognized the need for improved performance by the Joint Staff and first recommended the joint specialty. The report, titled *The Organization and Functions of the JCS*, was prepared by the Chairman's Special Study Group.<sup>4</sup> It stated that if they are to be effective, joint institutions require support "by officers of the highest quality—officers skilled, experienced, and interested in joint command and staff matters."

The report cited problems with officers serving in joint duty:

The flag rank executives of the Joint Staff are temporary—serving only 2 years or less on the staff. Their subordinates serve only slightly longer—about 30 months on the average. Both are drawn exclusively from the Services, who of course not only pay them but manage their promotions and careers. *Few have had formal training for Joint Staff work and even fewer previous Joint Staff experience.* Only about one-third have even had Service staff experience. Most have come directly to Washington from specialized field operations where they have had little contact with the complex issues with which the Joint Staff must deal. *Few if any will ever come back to the Joint Staff.* The average Joint Staff officer, while knowledgeable in his Service specialty, *has limited breadth of knowledge of his own Service, much less a broad understanding of his sister Services.* He has *little incentive to gain such an understanding*, since his tenure on the Joint Staff is so brief, *because his future is not there but rather back in his own Service.* (Emphasis added.)

The recommendations of the Special Study Group Report parallel many Goldwater-Nichols provisions intended to improve performance on joint staffs: creation of a joint duty career specialty for selected officers; education in joint schools (AFSC, NWC, ICAF); a mix of service and joint duty assignments; and filling half of all joint duty positions with specialists (or nominees).

But are joint specialists intended by Congress to be solely a corps of staff officers? The panel thinks not. Admiral James Holloway, former Chief of Naval Operations, reminded the panel that the *ultimate* joint specialist will be a joint task force commander or commander of a unified command. The joint specialist is surely not just a joint *staff* officer, Admiral Holloway insisted. The Goldwater-Nichols Act supports Admiral Holloway's views, both in its Critical

<sup>4</sup> Former Assistant Secretary of Defense William K. Brehm was the project director. Principal members of the group were Gen. Walter T. Kerwin, USA (Ret.), former Vice Chief of Staff, U.S. Army; Gen. William V. McBride, USAF (Ret.), former Vice Chief of Staff, U.S. Air Force; Gen. Samuel Jaskilka, USMC (Ret.), former Assistant Commandant, U.S. Marine Corps; and Adm. Frederick H. Michaelis, USN (Ret.), former Chief of Staff, U.S. Pacific Command.

Occupational Specialty exemption (intended to ensure a constant influx of combat arms officers into joint duty assignments) and in its requirement that the commanders of the unified and specified commands be joint specialists. Although the law leaves enough latitude for the joint specialty to include officers with the diverse mix of skills and capabilities required in joint assignments, it *clearly intends that the future senior combat leaders of the armed forces will be drawn from the joint specialty.*

The panel has concluded, therefore, that the oft-heard attempt to draw a mutually exclusive distinction between the staff officer and the combat leader is incorrect, misleading, and counterproductive. Contributing to the panel's problem in understanding the joint specialty was a constant stream of adverse comments about Congress having created a corps of staff officers who could do nothing but push papers. The "warrior-versus-staff-officer" debate has been joined for years. The Goldwater-Nichols Act, if anything, favors the warrior, as indicated above. Nevertheless, some critics continue to condemn the joint specialist as an elitist staff officer.

The warrior-versus-staff-officer debate is in fact based upon false premises. There is no "either/or." Most military commanders, whether today or throughout modern history, have served as staff officers. Since the Napoleonic era, as military forces have increased in size, staffs have become even more important to planning and coordinating the large, complex military organizations. The importance of staff-type military skills has been apparent to the U.S. military since the Revolutionary War. General George Washington's ultimate success leading the Continental Army probably owed as much to his knowledge of supply and other aspects of logistics and provisioning gained during the French and Indian Wars as it did to his tactical and strategic ability to employ armed forces. Much later General Omar Bradley graphically recounted the inter-related contributions of the staff officer and the warrior in *A Soldier's Story*:

While mobility was the "secret" U.S. weapon that defeated von Rundstedt in the Ardennes, it owed its effectiveness to the success of U.S. Army staff training. With divisions, corps, and Army staffs, schooled in the same language, practices, and techniques, we could resort to sketchy oral orders with a perfect understanding between U.S. commands.

Today, most field grade and one- and two-star officers will serve staff tours. Future three- and four-star commanders almost inevitably serve in many of these staff positions. The nature of their staff duties are similar whether they are assigned to the higher headquarters of the services or to joint positions. With very few exceptions, then, officers cannot, and should not expect to become senior military leaders without successful performance in staff positions that help prepare them for senior command. Consequently, staff duty should be viewed constructively, as a key part of an officer's career development. The commander, particularly in the modern era, is a combination of both warrior and staff officer.

The question posed by the Goldwater-Nichols Act, in any case, concerns the *distribution* of officers to the various staff assign-

ments, *not* whether they will serve on staffs. They will, as they always have. The act requires that *joint* staffs be peopled by officers of the same caliber as the best service staffs. The panel agrees wholeheartedly with this objective of the act. The joint command and staff structure should be developed to the same degree of competence and efficiency that General Bradley ascribed to Army units over 40 years ago.

In the view of the panel, then, joint specialists may be combat arms officers or experts with skills that are needed in joint and service assignments, or both. As Congress intended, they are in the top element of their peer group and are experienced in joint assignments. They possess the attributes suggested by General W. Y. Smith, USAF (Ret.), former Deputy Commander in Chief of the European Command: (1) an in-depth, expert knowledge of their own service, (2) some knowledge of the other services, (3) experience operating with the other services, and (4) mutual trust and confidence in the other services.

#### JOINT PERSPECTIVE

The panel would add one important caveat to General Smith's summation. Joint specialists should have sufficient knowledge of the other services and the perspective to allow them to "see joint"—that is, not to view the other services from the perspective of their own, but to view all of the services from a higher vantage point, the joint perspective personified by a unified commander or the JCS Chairman. The panel believes joint specialists should ultimately develop a perspective on the employment and support of military forces that is more comprehensive than their non-JSO service contemporaries. This means developing the capacity to plan and execute military missions in support of national objectives with either single- or multi-service forces. Such a capacity requires joint specialists to reach beyond the competence of their own service to understand the capabilities and limitations, doctrine, and culture of the other services. It means rejecting approaches that always favor their own service, and seeking innovative and creative ways to employ a wider spectrum of force options than exists in a single service. It means commitment to developing and implementing policies, procedures, and practices that will make multi-service joint operations the norm rather than the exception as has too often been the case in the past when ad hoc command and control mechanisms had to be devised on short notice, often in the middle of a crisis.

#### PROFESSIONAL DEVELOPMENT

The panel strongly agrees with the many witnesses and interviewees who emphasized that Joint Specialty Officers must, as a prerequisite to further professional growth, be competent in their own service. They must be expert in their own warfare specialty and have a broad and deep understanding, based upon experience and professional military education, of the major elements of their service. JSOs must also learn about the other services, their capabilities and limitations, doctrines, organizational concepts, and command and control structures. The more familiar they are with the other services, the less likely they will be arbitrarily to choose

solutions favoring their own service. They will also be more capable of effectively integrating multi-service capabilities and joint solutions to military problems. As they understand more about the other services, JSOs should turn to joint command and control, theater planning, and national military and national security strategy. In the view of the panel, the joint specialist most consistent with the law is an officer, expert in his or her own warfare specialty and service, who develops a deep understanding, broad knowledge, and keen appreciation of the integrated employment and support of all services' capabilities in the pursuit of national objectives.

The panel also believes that a select number of joint specialists should be designated for even broader study and corresponding assignments as strategists. These officers should function primarily at the national level. They should constitute a nucleus of the best thinkers and planners that would be available to the President and Secretary of Defense. They should be expected to man critical positions on the National Security Council staff, at the Department of State, the Department of Defense, and on the Joint Staff.

#### PREREQUISITES

Joint specialists should meet stringent prerequisites for nomination and selection. They must be competent and qualified in their warfare specialty. They must have a firm foundation of education and experience in their own service that provides the basis for understanding what they are taught about the other services and applying their knowledge to the employment of joint forces. Consequently, joint specialists should be in the top quarter of their year group (i.e., the group of contemporaries who entered active duty in the same year). If a combat arms officer, the joint specialist should be competitive on a best qualified basis with non-JSO contemporaries for field grade command.<sup>5</sup> JSOs should have displayed the intellectual capacity to deal with complex issues, ambiguity, and situations requiring the synthesis of a myriad of facts. They should possess the potential to deal with abstract notions and concepts.

JSOs should also be broadly educated, preferably in both civilian and military schools. Their military education should include appropriate schools for his primary warfare skills, command and staff college, and joint education as now required by law.

#### JOINT EDUCATION REQUIREMENTS SUBSEQUENT TO PASSAGE OF THE GOLDWATER-NICHOLS ACT

The foregoing material provides the foundation for the panel's views on joint education. The historical review makes clear that as a result of their experience during World War II, a number of the nation's most renowned military leaders strongly supported the concept of education on multi-service operations. It provides evidence that time may have corrupted what they intended for the joint schools. But history also reveals that the term "joint education" has been applied only to schooling directed by an authority independent of any service and characterized by a multi-service

<sup>5</sup> The "best qualified" criterion denotes a comparison among officers in which the most outstanding are selected. It is more selective than "fully qualified," which means that an officer must meet certain standards, but does not involve a comparison with other officers.

faculty and student body as well as a joint curriculum. Indeed, the panel found that to British, German, and French officers the term "joint education" was incomprehensible unless it included all four of these elements.

As the discussion of the Goldwater-Nichols Act also makes clear, Congress expanded the concept of joint education in 1986. It required that *all* officers attending service PME schools study joint matters and that Joint Specialty Officers receive "genuine" joint education in joint schools. Congress' objective is nothing short of a change in the culture of the officer corps. In the words of Admiral Harry D. Train, II, former Commander in Chief of the U.S. Atlantic Command, it is to arrive at a point where "jointness is a state of mind." A former war college president added that "[jointness is] an acculturation process that takes both time and emphasis."

That is why Congress, in the panel's view, placed such importance on new, expanded roles for the PME schools. Schools transmit, interpret, and share culture. The panel believes that the objective of joint education should be to change officers' attitudes about developing and employing multi-service forces. The portrait of the Joint Specialty Officer in the last section is convincing evidence of the educational burden placed upon the joint schools if they are to accomplish the congressional objectives and contribute sufficiently to JSO professional development. In many respects, however, the challenge posed by the Goldwater-Nichols Act for service schools is equally as great.

The service schools are charged with helping to reshape the culture of the officer corps as a whole. They are required to provide education in joint matters for *all* students, whether or not those students will become JSOs. Establishment of the joint specialty to support the Chairman, JCS, and the unified and specified commanders does not obviate the need for improving joint education in service schools for officers throughout the armed forces. Even with the emergence of the joint specialist, joint staffs will continue to be manned primarily by non-joint specialists (including inexperienced nominees for the joint specialty). Consequently, non-JSOs need training in joint staff procedures and systems, and broad education in the capabilities, limitations, and doctrines of the other services. In fact, non-JSOs are essential to the proper functioning of the joint system because they bring current service expertise and credibility to bear in considering the solutions to joint problems. The Chairman, JCS, and the unified and specified commanders—and the joint specialists—will rely upon service experts to elaborate force options and to implement decisions.

#### JOINT EDUCATION AS A SPECTRUM OF STUDY

Because the Goldwater-Nichols Act requires DOD to expand the study of joint matters beyond the confines of joint schools, joint education must be considered as comprising a spectrum of study. Recalling that one objective of title IV is to increase the appreciation by *all officers* of the importance of joint approaches, the joint education spectrum begins with the first military training officers receive. It extends through familiarization in joint matters for *all junior officers* to the joint curriculum for *all students at service schools* to the "true" joint education for *JSOs at joint schools* and

finally to the study of *national security strategy*, an inherently joint pursuit, for selected officers. The following discussion is based on the concept of a joint education spectrum applicable to all officers.

*Precommissioning through company grade.* Joint education should begin early in an officer's career, probably during precommissioning training. This early exposure is not meant to provide in-depth knowledge of joint matters or to prepare prospective officers for joint duty. Rather, it should introduce them to a broader perspective from which to view the narrow, focused branch or warfare-specialty training, primarily skill-related, that he will receive in the first years of his commissioned service. Early joint education should allow them to relate, in a general way, their contribution and that of their unit to the overall military effort. It should also help them to understand, in the context of their own branch or warfare specialty, how each service supports missions of the other services (e.g., fire support, airlift, sealift, close air support, intelligence). Finally, it should encourage them to reach beyond the knowledge and skills required of their warfare specialty and begin a career-long commitment to reading and studying about warfare, including its broader concepts.

*Field grade and higher.* Joint education for field grade officers should initially broaden their knowledge to cover other branches of their own service (what the Army calls "combined arms") and other services and should focus on operational art, or theater-level warfare. Students should learn why major military operations, almost without exception, will be joint, and they should develop the capacity to perform in the joint environment.

The panel believes the *intermediate schools* should be the principal schools for learning jointness. Everyone who attends service intermediate schools should learn the mechanics of joint matters that all officers should know: other service capabilities, limitations and doctrines, and the relevant joint procedures and processes. Joint specialists need to gain the joint perspective that the World War II Army-Navy Staff College experience indicated could best be done by studying joint force employment in a joint school.

At *senior levels*, joint education should involve study and experience in the integrated employment of multi-service forces at the national level, national military strategy, and, for selected officers, national security strategy. The higher officers progress in rank, whether they serve in joint duty or service positions, the greater their need to understand the other services, joint operations and support, and ultimately national-level policy and strategy.

The shift in focus for field grade officers, both in schools and units, is from skill training to education—improving officers' analytical capabilities and teaching them how to deal with uncertainty and ambiguity. They must shed the rigidity learned in drills and exercises as junior officers and become more flexible in their thinking because "war eludes rules . . . and rewards the inventive mind . . . [and] ingenuity," as General Paul F. Gorman, USA (Ret.), former Commander in Chief, U.S. Southern Command, reminded the panel. Joint education confronts one aspect of that rigidity. Having spent most of their career to date in their service, officers are likely to be predisposed to solutions to military problems in-

volving only forces and doctrine of their service. A major purpose of joint education is to overcome that predisposition.

#### THE SUBSTANCE OF JOINT EDUCATION

*Joint matters.* To determine the subject matter of joint education, the panel found it necessary to define joint matters. It is a subject that eludes precise definition. The Goldwater-Nichols Act defines it as:

. . . matters relating to the integrated employment of land, sea, and air forces, including matters relating to—

(1) National military strategy;

(2) Strategic planning and contingency planning;

and

(3) Command and control of combat operations under unified command.

The Senior Military Schools Review Board (SMSRB), appointed by the Chairman, JCS, in 1987 to review PME schools recommended that this definition be expanded. The board, headed by General Russell E. Dougherty, USAF (Ret.), a former Commander in Chief, Strategic Air Command, concluded that joint matters should also include:

. . . national security policy . . . joint and combined operations, joint doctrine. . . [and] actions related to mobilization of forces/resources, joint logistics, communications, and intelligence, and the joint aspects of the planning, programming and budgeting process.

The panel developed its conclusions on the meaning of "joint matters" by considering the changes suggested by the Dougherty Board. Following are the panel's conclusions:

National security policy, although it includes everything in the Dougherty Board and Goldwater-Nichols definitions, may be so broad as to confuse, rather than clarify, the focus of joint education.

The inclusion of joint and combined operations, joint doctrine, logistics, communications and intelligence conforms with the Goldwater-Nichols Act definition and essentially amplifies the meaning of terms already contained in the law. Also "embedded" in the Goldwater-Nichols definition are theater/campaign planning, and military command and control systems and their interfaces with national command systems. The panel believes it is important to emphasize that military history offers noteworthy lessons to modern-day problems in each of these areas.

By adding the programming, planning, and budgeting process to the definition of joint matters, the Dougherty Board correctly sought to respond to the JCS Chairman's new resource allocation responsibilities added by the Goldwater-Nichols Act. But those responsibilities encompass the entire range of joint force development. Adding only the planning, programming, and budgeting process would risk generating minor education requirements concerning



narrow processes, not much more than skill training. *Joint force development*, on the other hand, includes the planning, programming, and budgeting process as well as the JCS Chairman's responsibilities with respect to recommendations on service programs and budgets, alternative programs and budgets, unified and specified command programs and budgets, and assessing military requirements for defense acquisition programs. Admiral William Crowe, the Chairman, JCS, recognized this in his testimony when he said, "resource management is a different but still vital part of the total force planning process....We often overlook this side of the picture when talking about Joint Specialty Officers and joint duty assignments." Thus the panel considers joint force development an integral part of the definition of "joint matters."

Mobilization of forces/resources, on the other hand, is too all-encompassing to be included in the definition of joint matters for professional military education. Mobilization is a type of resource allocation. Normally mobilization is thought of in its broadest sense, that is, in mobilizing all of the resources of the nation. It includes military, economic, political, and increasingly, international factors. Like national security policy, then, *national* mobilization is inherently joint but so comprehensive that its inclusion in the definition of joint matters may confuse, more than clarify, the focus of joint education. Certain military aspects of mobilization are, however, a part of joint force development and thus fall within the definition of joint matters. An example is mobilizing the elements of a joint task force (e.g., a combination of Army brigades, Air Force wings, and Navy battle groups). The "mobilization of forces" in this sense should be understood as part of "joint matters." This admittedly fine line may not be as significant for the Industrial College of the Armed Forces as for other PME schools because ICAF includes all aspects of mobilization in its curriculum.

To summarize, the panel considers "joint matters" to include:

(1) The elements contained in the Goldwater-Nichols Act.

Integrated employment of land, sea, and air forces.

National military strategy.

Strategic planning.

Contingency planning.

Command and control of combat operations under unified command.

(2) Several other subjects subsumed in the elements contained in the Goldwater-Nichols Act definition.

Joint and combined operations.

Joint doctrine.

Joint logistics.

Joint communications.

Joint intelligence.

Theater/campaign planning.

Joint military command and control systems and their interfaces with national command systems.

(3) Joint force development, including certain military aspects of mobilization.

The panel did not consider as "joint matters" many of the subjects described in school curricula such as defense management, executive development, executive decision-making, bureaucratic processes, and regional studies. They are not directly related to the areas the panel considered should be the real focus of intermediate and senior military education—force employment and force development. The panel also excluded, as discussed above, national security policy and national mobilization studies from the definition of "joint matters." Although the subjects are inherently joint, they extend beyond "national military strategy" specified in the Goldwater-Nichols Act definition to a level of generalization more suitable for the education of "national security strategists," as discussed in the previous chapter.

*Additional joint education requirements.* Although "joint matters" are the core of joint education, they are not the entire curriculum. As stated earlier, a *prerequisite* for the joint education of officers, at any level, is competence commensurate with their rank in all of the elements of *their own service* in terms of professional knowledge and understanding (e.g., in the Navy, surface *and* aviation *and* subsurface) as well as demonstrated performance.

Though not technically "joint matters," an integral part of joint education is an officer's study of the *other services*. The body of "other-service" knowledge useful in the joint context includes:

Capabilities and limitations of other-service forces, including weapons system technologies.

Organization of other-service headquarters and forces and the organizing concepts used to build larger forces or to tailor forces for specific operations.

Doctrine for the tactical and theater employment of other-service forces, from low-intensity conflict to nuclear war.

Command and control systems of other-service forces, to include how they can be integrated with the officer's own service systems.

Although all officers will not pursue these subjects in depth as part of their joint education, it is imperative for the JSO to do so and important for all other officers who serve in joint assignments. For joint specialists or service officers assigned to joint duty positions, knowledge of other services, an understanding of the opportunities presented by the array of multi-service capabilities, insights into how the services can best operate together to attain specific military objectives, and an appreciation of how the limitations of their own service can be strengthened by the contributions of another are crucial to their success.

Therefore, joint specialist education must develop early and continually reinforce a knowledge and experience base that enables the JSO to accept or reject advice and recommendations on force planning and employment from service experts serving in joint

duty billets. Officers who are not joint specialists and who are from different services will often have more detailed knowledge about the capabilities of their own service than the JSO. Accordingly, their views will carry great weight in any discussion of force options; but, because they may be institutionally blind to the full range of options, the JSO must be educated to ferret out innovative, creative uses of all service forces, identify limitations, assess the potential synergy of force options, and develop the command and control mechanisms required in particular instances.

*Joint knowledge—a problem and a challenge.* Too often joint knowledge is equated with joint processes, a subject that is only a minor and rather elementary part of the potential body of joint knowledge. All students should be introduced to joint processes and procedures as part of the basic intermediate service school orientation on joint matters. But genuine joint education should develop the student's ability to analyze joint issues. Concentrating on processes will not accomplish that. General John Galvin, USA, Supreme Allied Commander, Europe, cautioned that it is too easy for schools to focus on the procedural aspects of joint matters at the risk of not addressing broader military issues. The panel learned that another reason for superficial coverage of more complex joint issues may be the absence of a comprehensive body of knowledge on joint doctrine, organizing concepts, and command and control.

Numerous individuals interviewed by the panel decried the inadequacy of the current body of joint knowledge for successful, modern wartime joint operations and, as a consequence, for the teaching of joint matters. A retired three-star Army general described the situation as "a disgrace, that after 40 years we haven't produced any [joint doctrine]." One former commander of the Army Training and Doctrine Command cogently described the difficulty in dealing with joint operations at the theater level. He gave three reasons for the problem: (1) after winning World War II, military leaders were satisfied with their knowledge of military matters and believed there was no need to develop further doctrine and procedures; (2) the advent of atomic weapons meant that future wars would be short and limited; and (3) most of the leaders who emerged from World War II were tactical commanders and experts; very few had any theater-level experience, and no one bothered to develop that expertise. Consequently, he said, the armed forces "lack policies, procedures and techniques to synchronize the operations of the four services." He also contended that some military leaders do not want to solve the problem and see no need for full integration of the services' capabilities. Besides, he explained, these are "hard" problems, often pitting service against service, and it is easier to deal with "softer" political-military and strategy issues.

It was beyond the scope of the panel's inquiry to investigate whether there are serious inadequacies in doctrine and other arrangements that guide joint operations. If such inadequacies exist, the problem is of the highest moment. Lives could be lost needlessly in future military operations if separate service units are not properly integrated into combat forces. Since passage of the Goldwater-Nichols Act, the Chairman, JCS, has established on the Joint Staff a Director for Operational Plans and Interoperability (J-7),

who assists the Chairman in fulfilling his responsibility for "developing doctrine for the joint employment of the armed forces." The panel understands the J-7 has an ambitious program to develop joint doctrine.

Inadequacies in joint knowledge, however, provide both a challenge and an opportunity for joint education. The service professional military schools (particularly those of the Army) have traditionally been a key source of service doctrine and related operating procedures that are ultimately approved by the field commands, training command, and service headquarters. Instructors and students, working together, have translated experience and study into the doctrine and other guidance that governs their service in wartime. The serendipitous consequence is that the institutions responsible for teaching accumulated service wisdom about warfare are the same institutions that collect, analyze, synthesize, and articulate that wisdom. The schools, then, are both the source and progenitors of knowledge about warfare. As such, rather than remote ivory towers, they are up-to-date, on the cutting edge of military knowledge, and vital to their services.

The panel believes that joint schools should be given a major share of the responsibilities for reviewing, revising, and developing workable joint doctrine as well as related organizational concepts, practices, and procedures for the integrated employment of multi-service forces. Today, JSOs should be taught about the range of possible solutions to inter-service problems and the areas in which no agreed doctrine and procedures exist. Eventually, JSOs, working through the Joint Staff, J-7, and the joint schools and with the assistance of service experts, should take the lead in developing procedures for joint force organization, deployment, and employment in various theaters.

Under the Goldwater-Nichols Act the Chairman, JCS, is responsible for joint doctrine. The panel believes that the Chairman should turn to the joint schools to assist him in carrying out an ambitious program to develop and assess joint doctrine and related joint knowledge. In this way, the joint schools should become vibrant joint institutions. Each should be a center for the expansion of joint knowledge and a source of educational materials, exercises, and teaching techniques on joint subjects for service, as well as other joint schools.

If the joint schools help develop joint doctrine, the services will have a strong incentive to send good officers to the schools—they will want to ensure that joint doctrine fully considers service interests. Quality officers will also be encouraged to serve on the faculties of joint schools.

#### THE PERSPECTIVES FOR JOINT EDUCATION

Joint and service schools should teach joint curricula from the perspectives of (1) a commander of a unified command and (2) a contingency joint task force commander at the three-star level. Discussions with senior retired three- and four-star commanders indicate that concentrating on these joint commands would require students to learn the range of problems associated with interfaces between multi-service forces. The preferred approach would be similar to the one used by ANSCOL in which students focused on three

joint case studies to bring out the problems, possibilities, and potential solutions to the employment of multi-service forces. Although only examples, the case studies gave officers returning to their theater commands the intellectual background to grapple with the full panoply of joint force problems, even when the particular circumstances had never before been encountered.

#### THE SETTING FOR JOINT EDUCATION—MULTI-SERVICE STUDENT BODY AND FACULTY, AND JOINT CONTROL

The term joint education is often used, incorrectly, to refer to instruction in joint matters *without* regard to such important factors as the composition of the student body and faculty or who controls the school. Courses are misleadingly termed "joint education" if they address multi-service problems and issues or joint staffing procedures and systems, such as the Joint Operations Planning System. In fact, curriculum only sets the stage for the joint educational experience. Beyond curriculum, a mixed student body and faculty and an independently controlled school are all important elements of joint education.

Joint education includes what the Armed Forces Staff College terms "affective learning": the mutual understanding and rapport that develop when students from all services study in mixed seminars and share the ideas, values, and traditions of their services, when they solve joint military problems together, and when preconceived notions about the nature of and solution to problems of warfare, learned during service training and education, are challenged daily. In mixed seminars, a student who attempts to impose his service bias on the discussion will immediately be challenged.

*Student Body.* A key factor in joint education, then, is the composition of the student body. In *schools that educate joint specialists*, the standard should be equal representation from each of the three military departments. For *other schools*, representation of each service in the student body should eventually be much higher than today. Senior schools should have a student mix of 50 percent from the host military department and 25 percent from each other military department. Ideally, intermediate schools should have the same student body mix as senior schools for non-JSO education. But the rationale for such a standard is less compelling because the curricula of senior schools have a greater joint component. Moreover, a 50/25/25 percent student body mix would be very difficult to achieve. Consequently, the panel believes that intermediate schools should have a minimum of two, and a goal of three, officers from each military department in each seminar.<sup>6</sup>

The qualifications of the student body also have a significant impact on joint education; an acceptable student body mix is not in itself sufficient. Each military department must select its PME students from among its most outstanding officers. In addition, the student body mix must consist of students of *equally* high caliber from each military department. Finally, each service must provide students from all combat arms branches and warfare specialties.

<sup>6</sup> In Chapter IV the panel will recommend a phased plan to achieve the proposed student mixes.

To ensure quality in joint specialist student bodies, DOD should use the prerequisites for JSOs discussed earlier as a guide for selecting nominees: top quarter of their year group, competent and experienced in their own service, high intellectual capacity, basic understanding of the mutual interdependence of the services, and broad education. With respect to prior education, the panel believes that students attending joint specialist education should have attended a service intermediate school and should understand how units from their service operate as a component in a joint command.

*Faculty.* Throughout its inquiry, the panel was told that *most* of the learning about other services in PME military schools resulted from student exchanges in the classroom. There can be no question that, as indicated above, this type of learning is very important. The extent of dependence on student exchanges as an educational device in some schools is, however, disturbing. Several witnesses considered it an indictment of the faculty. Indeed, it may be. The ultimate utility of student exchanges depends on competent faculty guidance. Unguided student discussions can reinforce ignorance and constrain, rather than expand, thinking.

A quality faculty that *teaches*, rather than merely facilitates, is imperative if joint education is to open new horizons and stimulate thinking about more complex military issues. The faculty members must introduce the subjects for discussion and lead the class through the various topics. Free discussion among students should be structured by the faculty members so that the class moves from one topic to the next. The instructor should be qualified, prepared, and willing to step in and correct student statements that contain incorrect or dated information. Moreover, he should intervene to sum up each main point of the lesson as the class progresses and should summarize the major points at the end of the class.

Joint education faculties should be made up of officers who, while preserving their service origins, also serve the more catholic *national* military interest. They should bring to the classroom not only expertise in their service, but also a quality no seminar made up solely of officers from all the services is likely to achieve on its own—a neutral perspective on use of the full range of military options. Joint faculty members should be expected to challenge conventional wisdom and to stimulate thinking about novel or creative ways to employ and support military forces. Moreover, their own joint education and experience should have prepared them to offer professional insights during student discussions. At present, although there is a dearth of knowledge about joint operations and of joint doctrine, joint faculties can address the joint employment problems that have plagued our armed forces over the past 40 years.

It follows from the above that the educational qualifications and military experience of the joint faculty are paramount. Instructors must be able to explain and debate joint issues with the confidence that only experience and study can provide. An inexperienced faculty member with a weak educational background will have little success in broadening the uni-service perspectives of his students. Ideally, the panel believes, each military member of a joint faculty should have completed the intermediate service and joint schools.

An advanced civilian degree should be a prerequisite for assignment to a teaching position or (less desirably) attainable through a faculty development program. Prior joint duty experience by every joint faculty member should, as well, be a goal. In future years, joint specialist education should increasingly be taught by fully qualified JSOs.

*Faculty mix* is also a key consideration. Joint education, in the strongly held view of the panel, requires a military faculty that is representative of each of the services.

European schools have found faculty mix important as well. In the British Joint Service Defence College, faculty mixes are a one-third ratio by service, like the student body. In Germany, joint education occurs primarily through collocation of service schools and shared portions of the courses. The French joint staff course uses a mix of faculty from each of the service intermediate schools and a small faculty of its own with about equal representation from each service. At the senior level, the British and French each have only one school, and both are joint with faculties and student bodies proportionately mixed by service. The Germans are considering establishing a senior PME school that will also be joint.

Should U.S. military schools be required to have a military faculty mix representative of the services? The May 1987 Senior Military Schools Review ("Dougherty") Board recommended that *service* school faculties have a minimum number of instructors from other services—about 10 percent from each of the other military departments. On the other hand, the September 1987 National Defense University report on joint specialist education, prepared by Lieutenant General Bradley Hosmer, NDU President, for the Chairman, JCS, recommended the current NDU standard for the joint curriculum. Under that standard, each military department provides one-third of the faculty. JCS debate on the issue apparently has addressed the one-third faculty mix and an alternative mix of 50 percent host military department faculty officers and 25 percent each for the other two departments.

The panel believes *joint specialist education* should be accomplished in schools with equal representation from each military department. This one-third mix is ideal for exposing officers to the broadest possible range of multi-service views. It is vital for the difficult job of inculcating a joint perspective that is the essence of joint specialist education. It has been and remains today the joint school standard. The panel is convinced the one-third mix must be the standard for JSO education.

For *non-JSO joint education* the situation is more complex and the theoretical desirability of high percentages from each service has to be balanced with the feasibility of attaining the needed numbers of faculty. The complexity leads to analyzing the senior and intermediate levels separately.

At the *senior* level the faculties are smaller and much of the curriculum, as cited earlier, is inherently joint. In fact, a number of witnesses suggested that all of the war colleges become completely joint. The panel view is that with the separate and distinct educational missions of the service war colleges—land, sea, and aerospace warfare—it is appropriate for them to weight their faculties toward those missions. With the varied missions in mind, the panel

believes the JCS-discussed mix of 50 percent host military department faculty and 25 percent for faculty from each of the other military departments (50/25/25 percent mix) is appropriate.<sup>7</sup>

At the *intermediate* level the faculties are larger and the proportion of the curriculum that addresses joint subjects is smaller than at the war colleges. For these reasons, the faculty can be comprised of fewer instructors from other military departments. The panel believes that a minimum of 15 percent of the faculty should be from each of the non-host military departments.<sup>8</sup>

In summary, for faculty mixes by military departments, the panel believes the permanent standards should be: (1) joint schools (JSO-education) should continue with one-third mixes, (2) senior service schools should have 25 percent from each non-host military department, and (3) intermediate service schools should have at least 15 percent from each non-host military department. It should be noted that these standards apply to the entire active duty military faculty, not some fraction designated as a nominal "joint education" department. PME school officials emphasized in their testimony that the joint material is inextricably interwoven into their curricula. That being the case, faculty representation from each military department is required for the entire curriculum.

Although the discussion of joint faculty has focused on military officers because they are a key factor in developing a joint perspective, the panel also believes civilian faculty can contribute significantly to the joint curriculum, particularly at the senior level where curriculum addresses the interplay of military with political and other factors relevant to national security.

*Control of Joint Education.* Congress, in crafting the Goldwater-Nichols Act, did not alter the traditional chains of command for either service or joint professional military education. Each service school, in accordance with the long-established training missions of the services, remains under the direction of its respective military department secretary and, in particular, its service chief. The Goldwater-Nichols Act assigned the *joint* education and training mission to the Secretary of Defense and made the Chairman, JCS, responsible for rendering advice and assistance to him. Thus, the joint schools of the National Defense University remain under the overall authority of the Secretary, with control exercised by the Chairman, JCS, and his subordinate, the NDU president.

The panel agrees with the legislative arrangement for the joint schools. The Chairman, JCS, who is the principal military advisor and the spokesman for the unified and specified commanders, should control the institutions that educate joint specialists. The joint schools should be responsive to the needs of the Chairman and, through him, to the commanders of unified and specified commands. Curricula should change if deficiencies in the knowledge or abilities of the schools' graduates are identified. Selection of school leadership should be determined by the Chairman, as well as criteria for nomination and selection of faculty. Student selection poli-

<sup>7</sup> In Chapter IV the panel will recommend a phased plan to achieve the proposed *senior*-level faculty mix.

<sup>8</sup> In Chapter IV the panel will recommend a phased plan to achieve the proposed *intermediate*-level faculty mix.



cies and criteria should be established by the Chairman, executed by the services, and overseen by the commandants of the schools.

Despite the fact that Congress did not alter the traditional responsibilities for service education, the division of responsibilities between the services and Secretary of Defense/Chairman, JCS, with respect to non-JSO joint education is not as clear-cut as it might at first appear. The Goldwater-Nichols Act made the Secretary of Defense responsible for ensuring that the service schools strengthen their focus on joint matters and better prepare officers for joint duty assignments. In addition, over one-half of the senior-level students and one-third of the intermediate-level students attend either joint schools or the schools of another service. Consequently, all PME schools, by virtue of the composition of their student bodies, shoulder important joint responsibilities for the education of sister-service students. The panel is convinced, therefore, that the Secretary of Defense and Chairman, JCS, must assume an active role in overseeing the joint curriculum and faculty of each service PME school, recognizing that service missions should remain the principal focus. The Chairman acknowledged this responsibility in his testimony on August 11, 1988.

### COMPARING JOINT FACTORS IN PME COLLEGES

In this section the panel presents its findings and conclusions concerning the joint education provided by the 10 PME schools. The panel's study of PME history, the Goldwater-Nichols legislation, and the joint specialty helped to shape its views on the new requirements for joint education. The new requirements, in turn, provide the basis—in effect, set the standards—for assessing the adequacy of the curricula, faculties, and student bodies of the PME schools with respect to joint education.

#### CURRICULUM

The school commandants and other officials who appeared as witnesses before the panel almost uniformly emphasized that the curriculum of their particular school is "joint." The panel's analysis confirmed their claims. The war colleges (Army, Navy, Air Force, National) devote roughly 60 percent of their core curricula hours to joint subjects. The intermediate Armed Forces Staff College far exceeds the 60 percent. The Industrial College devotes more than 40 percent of its curriculum to joint subjects even when mobilization is excluded. Although the joint content of intermediate service schools varies significantly, with one exception they devote no less than one-third of their curricula to joint subjects.

In arriving at these findings, the panel used broad, though valid, criteria to determine the joint content of the curricula. The panel also examined the curricula using the Goldwater-Nichols Act definition of "joint matters," as discussed earlier in this chapter. Even when the more rigorous Goldwater-Nichols Act definition is used (it would, for example, exclude national security policy), the general thrust of the findings remains unchanged.<sup>9</sup>

<sup>9</sup> In order to ascertain how much each school emphasizes joint matters, the panel categorized the core curriculum of each school into three categories: (1) joint matters, (2) service-oriented,

Joint content is only one aspect of a joint curriculum, however. During its visits to the PME schools, the panel attempted to judge how joint military subjects were treated. What it found was that joint education at service colleges too often has a narrow service bias. Discussion of joint material focused almost entirely on the role of the parent service in the joint operation or activity. As a result, students in service schools gained insufficient understanding of the complex problems involved in planning for and employing joint forces. The service schools also failed to explore the joint implications of the material. In the subjects assigned for study, major points involving the other services were overlooked or addressed superficially. It would be possible, for example, for a student to study British General Viscount William Slim's World War II Burma campaign and not be exposed to sea support or air command and control issues. Although the Goldwater-Nichols Act applies a somewhat lower standard for non-JSO joint education, one that accepts joint education from a "service perspective" (e.g., the perspective of a service component commander or staff), the panel concluded that a more knowledgeable, well-rounded approach to joint education in service schools is required.

The panel also found that insufficient education about their own and other services in service PME schools may impede the joint education of officers. All of the senior military leaders, active and retired, that were heard by the panel emphasized that the best joint officer is one who is expert in his or her own service. In an earlier section, the panel also noted that, if officers are to be effective in a joint assignment, they must understand the other services. Knowledge of their own and other services prepares officers to learn how multi-service forces can be integrated for joint operations.

*Army and Marine Corps Schools.* The Army Command and General Staff College and the Marine Corps Command and Staff College both concentrate heavily on the integration of branches of their services (such as, artillery, armor, and infantry) into the combined arms formations they would use in combat. The Army course, however, achieves a much higher concentration on joint matters because it covers the operational level of war, an inherently joint, combat-oriented study. Instead of joint warfighting, the Marine school devotes significant portions of its curriculum to staff writing and speaking skills and personal development. The Army teaches staff skills to more junior officers in its Combined Arms and Services Staff School (CAS3) that all Army captains attend. The panel believes the Marine school system would be improved if it more closely followed the Army pattern.

The classroom discussions of joint material the panel observed at the Army Command and General Staff College focused almost entirely on the Army role in a joint operation or activity. Some in-

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and (3) all other subjects. For this analysis the panel used the Goldwater-Nichols Act definition of "joint matters" rather than the broader panel definition discussed in the previous section. The "service-oriented" category includes material about the host school service. This means the "other" subject category includes a potpourri of subjects from national security strategy and foreign area studies (both inherently joint subjects but broader than the Goldwater-Nichols definition of joint matters) to communications skills and executive management.

structors privately expressed a reluctance, and even antagonism, toward dealing with joint subjects.

The Commandant of the Army War College asserted in testimony that his college is a joint school because 45 percent of its curriculum is devoted to joint matters and another 35 percent to national security matters. Moreover, he noted that an elective course addresses military strategy and joint operations at the theater level. The panel's analysis roughly confirmed the Commandant's claim about the proportion of the curriculum devoted to joint matters. But the panel found, as it did at other colleges, that the curriculum as defined by the syllabus and the curriculum taught in the classroom varied significantly. Although the panel saw only a snapshot of classroom activity, the Advanced Warfighting Course, the consensus was that little joint instruction or learning was taking place. The discussion was decidedly land warfare oriented, with cursory comments about air power and the potential role of naval forces.

*Navy Schools.* The curriculum at the College of Naval Warfare (the Navy senior school) has more hours devoted to joint matters, as defined in the Goldwater-Nichols Act, than any other service PME school, with the balance split between service war-fighting issues and other policy or management issues. As in other service colleges, however, joint matters at the College of Naval Warfare are approached from a service perspective. The panel believes this is an appropriate approach for a service school. But, by the same token, the service-oriented approach means that the College of Naval Warfare is *not* a joint school. It does not have the faculty mix, student mix, and perspective of a genuine joint institution.

The College of Naval Command and Staff (CNCS) is different from the other intermediate service schools. Its curriculum so closely parallels that of the senior Navy college that it is often perceived as merely a junior version of the advanced course. One consequence of the Navy approach is that the Navy intermediate school is by far the most "joint" of the service intermediate schools. That is because the senior course curriculum, which emphasizes strategy and operations at the theater level, is inherently joint. Another consequence, however, is that the Navy intermediate students spend far less time learning about maritime operations than the Army and Marine school students spend on land and amphibious warfare. The panel questions the Navy curriculum balance as well as the "one-level-at-two-schools" approach. A prerequisite for adequate performance in the joint environment is knowledge of an officer's own service, knowledge that is slighted at the intermediate naval school.

*Air Force Schools.* Although the Air Command and Staff College (ACSC) devotes about one-third of its curriculum to joint subjects, it devotes far less time than even the Navy to service-oriented subjects. As a result, the study of warfare—joint and uni-service—at ACSC constitutes less than half of the curriculum. Alone among the PME schools, ACSC gives more weight to staff skills than to warfighting. Recalling that a prerequisite for joint specialist education is knowledge about an officer's own service, the panel believes it is justified in calling for the Air Force to review its educational priorities. Beyond the joint rationale, however, the panel believes it

is in the best interest of the Air Force to educate its officers more fully about the employment of military forces.

Similar comments are warranted with respect to the Air War College. Roughly half of the core curriculum hours are devoted to joint matters. But only about 10 percent are dedicated to service matters.

*National War College.* Despite its focus on national policy, national security decisionmaking, and national security strategy, the National War College devotes almost half of its core curriculum to joint matters as defined narrowly in the Goldwater-Nichols Act. Even though National War College has increasingly concentrated on joint operations and national military strategy, it retains the overall political-military emphasis that has characterized its curriculum since its inception. The panel agrees with the emphasis on political-military subjects and believes that the participation of the State Department and other civilian government agencies is appropriate and needed at this level.

When the National War College was at the apex of the PME system in the immediate post-World War II era, its students were normally senior colonels and Navy captains who had attended their own service war college. They started on a higher plane than today and had a better foundation in their own service, in joint issues, and in national security policy. They were selected because they had a high probability for promotion to flag rank and were expected to serve in high-level command and staff positions. The change to "just another war college" in the 1960s forced the National War College to adopt a lowest-common-denominator solution to curriculum development to account for large disparities in rank, education, and experience among its students.

The National War College incorporated more warfighting and national military strategy in its curriculum to accommodate the needs of its students who were no longer graduates of a senior service college and who were both less senior and less certain as a group to achieve flag rank. The panel believes the National War College could do a better job on its traditional curriculum if the service schools assumed the responsibility for national military strategy and related subjects such as contingency planning and command and control of combat operations under unified command, as discussed in Chapter II. That foundation for the military students should allow the National War College to concentrate even more on the broader aspects of national security. Such a change should make attendance at the National War College more beneficial not only for the military students but for those from the State Department and other agencies.

*Armed Forces Staff College.* Roughly three-quarters of the Armed Forces Staff College curriculum is devoted to joint subjects. Much of the joint material, however, focuses on joint processes—line and block charts of command organizations, the structured planning process, the Worldwide Military Command and Control System (WWMCS), the Joint Operations Planning System (JOPS), and the Crisis Action System (CAS). The panel believes that instruction in these rather elementary subjects, although important, is more accurately characterized as training than education. Other parts of the AFSC curriculum devoted to management and communications

skills reinforce this staff officer training theme. The large percentage of the core curriculum devoted to subjects other than warfighting and war-supporting indicates the absence of a sharply focused program that is all the more serious given the brevity of the school compared to other command and staff colleges.

The Armed Forces Staff College long ago altered its original mission from "to train" to "to prepare" student officers "for joint and combined staff duty" in order to place greater emphasis on education—improving officers' ability to analyze and deal with a broad range of joint matters. Unfortunately, the school has found it difficult to adapt to the education mission. It tends to concentrate on training officers for their next assignment. This can be seen in its curriculum, which sets aside little time for learning to understand, analyze, and act on complex joint warfare issues. Consequently, the panel questions whether the AFSC curriculum will sustain officers beyond their next tour. The panel believes that a significant portion of the curriculum, particularly the parts related to organizations, processes, procedures, and staff skills—both service and joint—should now be taught at intermediate service schools where knowledge of both the joint and service systems is important to all students whether they become joint specialists or not. In the view of the panel, this is one of the implications of the Goldwater-Nichols Act requirement to revise the curricula of service schools to strengthen the focus on joint matters and prepare officers for joint duty assignments. Such a realignment of curricula could be easily accomplished because intermediate service schools already teach much of what is provided at AFSC. It could, however, result in a fundamental improvement at AFSC. If the intermediate service schools assumed the responsibility for teaching staff skills, processes, and procedures, AFSC could concentrate on case studies on the combat employment of forces, as did the Army-Navy Staff College in World War II. Joint *education* would then take precedence at AFSC.

AFSC is also weakened by the policy of each service to equate attendance there to attendance at its own command and staff college. Since 1968 students attend one or the other, not both. Consequently, officers who attend AFSC miss the service intermediate-level education that the panel was told is so important to officer development, particularly for potential field commanders. The panel believes that officers should attend a service command and staff college before AFSC.

#### FACULTY

The faculties in the intermediate and senior *joint* colleges—the Armed Forces Staff College, National War College, and the Industrial College—have the best service representation for teaching joint subjects. In fact, they are the only schools whose faculties approach the panel's standard: equal representation for each military department for JSO education. As shown in Chart III-4, none of the *service war* colleges even comes close to meeting the panel's recommended standard for *non-JSO* joint education: 50 percent parent military department; 25 percent each other military department. Similarly, the *intermediate service* schools have very low numbers of non-host military department faculty and fall far short

of the panel's lesser standard: 15 percent faculty from each of the other military departments.

CHART III-4—COMPARISON OF JOINTNESS IN FACULTY

[Academic year 1987-88]

	Service by percent					Civilian
	Parent	Army	Navy	Air Force	Marine Corps	
Intermediate colleges:						
Armed Forces Staff College .....		28	25	26	8	13
Army Command and General Staff College .....	76		2	4	2	16
College of Naval Command and Staff .....	47	8		7	8	30
Air Command and Staff College .....	88	6	5		2	0
Marine Corps Command and Staff College .....	86	5	5	5		0
Senior colleges:						
National War College .....		23	16	23	3	35
Industrial College of the Armed Forces .....		23	15	19	4	38
Army War College .....	66		2	3	2	27
College of Naval Warfare .....	47	8		7	8	30
Air War College .....	62	6	6		3	22

The Navy/Marine faculty at AFSC is somewhat overrepresented in comparison to Navy department faculty in other PME colleges, both joint and other-service. The overage should be distributed to Army and Air Force colleges; Navy department instructors are underrepresented in these schools.

The two Navy PME schools, though far short of the panel standards, have a better faculty balance for teaching joint subjects than any of the other service colleges. The Army and Marine intermediate college faculty mixes support the orientation of their curricula toward service warfighting, but they slight joint education. The Air Command and Staff College approach again puzzles the panel: the least warfighting-oriented of the colleges, it has the highest single-service faculty representation.

Much of the curriculum at war colleges is devoted to military strategy and theater operations and is therefore inherently joint. Consequently, war colleges need more "other-service" faculty than intermediate schools. The Army and Air War College faculties, however, greatly overrepresent their parent services. The College of Naval Warfare, though somewhat more balanced, requires significant increases in Army and Air Force faculty. The proportion of civilians on the faculties of the senior war colleges is significant and should not be reduced.

In visits to the service colleges, the panel found that the faculties lacked knowledge of other services and of joint doctrine and other joint issues required to direct discussion and correct misperceptions of how multi-service forces could best be integrated. The panel concluded that the 50/25/25 mix for *senior* service school faculties is not only valid, it is imperative. If it were feasible, *intermediate* service schools should have the same mix. The panel's standard of a minimum of 15 percent of the faculty from each of the other military departments should be considered just that, a bare minimum.

The panel learned firsthand during its classroom visits that unguided student discussions are insufficient as an educational

device. Some student officers told the panel that the Armed Forces Staff College faculty members often serve as little more than resource persons or facilitators. Similar comments were made at other schools. On the other hand, both the military and civilian faculty members at the Naval War College employed an active "hands-on" approach to lead their classes. The difference in learning outcome was obvious. The panel is convinced that the PME school faculty members should handle their classes in the same manner that graduate school classes are conducted throughout the country. Although students can, and do, learn from each other, the faculty of a school must provide the foundation and framework for learning to take place, each member serving as a source of insight, information, academic guidance, and critical evaluation. That means that the qualifications and ability of the faculty should overshadow those of the students who are, after all, there to learn from the faculty.

Although Chart III-4 demonstrates that the joint colleges have the best service balance for teaching joint subjects, the panel uncovered considerable evidence that the joint colleges are being slighted with respect to faculty size and quality. In comparison with other service colleges, the joint colleges have small faculties and high student/faculty ratios. This creates more demands on instructors, decreasing time available for preparation, research, and curriculum development. The faculty workload is not conducive to graduate-level education; it precludes the faculty members from attaining and maintaining expertise in all the fields they teach. Consumed by the workload, resident faculty have little opportunity for their own professional development or research.

Another disadvantage of overburdening the joint college faculties is lost opportunity for development of joint doctrine. As discussed earlier in this chapter, there is a shortage of joint doctrine and, relatedly, of materials to use in teaching about joint operations. The joint schools should play a key role in the needed development of joint doctrine. In order to accomplish this, the joint schools should have sufficiently low student/faculty ratios to permit faculty members to assist in the development of joint doctrine and to create teaching materials on joint subjects for use in both joint and service schools.

The ICAF Commandant testified that he has made a conscious concerted effort to decrease external lecturers but that this has caused him concern about having enough faculty to conduct additional, improved instruction in the classroom. Student/faculty ratios remain high, placing greater demand on outside sources for expertise. Each of the joint college commandants informed the panel that he lacks sufficient faculty to teach the curriculum of his school properly. Despite this shortage, recent requests to increase joint college faculties have been denied.<sup>10</sup> As a minimum, student/faculty ratios and resources devoted to the joint schools should equal those at the Army, Navy, and Air Force PME colleges.

Inadequate student/faculty ratios inevitably diminish the quality of the faculty and the resulting quality of instruction. Another

<sup>10</sup> The National Defense University, through an internal realignment of four positions, recently increased the ICAF faculty marginally.

factor that impacts more directly is the capability of the faculty. At the National War College, only 10 of the 21 military faculty members have had a joint duty assignment.

One explanation for the heavy reliance on student exchanges at the Armed Forces Staff College may be that the faculty is less capable than the faculties at other schools. Historically, AFSC faculty members have not been promoted at the same rate as officers in other duty positions. The promotion rates are, in fact, abysmally low. Over the past 5 years, the AFSC all-service promotion rate from lieutenant colonel/Navy commander to colonel/Navy captain is only 19 percent, compared to service-wide average rates of between 35 and 50 percent. Although AFSC receives nominations from the services for faculty positions and can reject them, it is apparent from information provided to the panel that many officers nominated and accepted have not been competitive for promotion when assigned to the school. The school has many relatively senior majors and lieutenant colonels/Navy commanders, most of whom have been passed over for promotion. Many faculty members have also been passed over for senior-level schooling. Faculty members often retire upon completing their AFSC tour. The retirement rates are 50 percent for lieutenant colonel/Navy commanders and 59 percent for colonels/Navy captains. These statistics indicate an absence of "front-runners" on the faculty.

As discussed in Chapter V, the panel believes the faculties at the joint schools should be at least comparable to those at the best service schools in terms of experience, educational background, promotion opportunity, academic stature, and student/faculty ratio. The Secretary of Defense, with the advice of the Chairman, JCS, should take action to ensure that the joint school faculties meet these minimum standards. The service chiefs should contribute by providing more high-quality officers with joint, operational, and subject-matter expertise.

#### STUDENT BODY

The joint schools, once again, meet the joint education standard established by the panel for JSO education: as close to equal representation in the student body as possible. As shown in Chart III-5, the student bodies at the joint colleges contain robust mixes of officers from each service for joint education. Overrepresentation by the Army and underrepresentation by the Navy/Marine Corps in the Armed Forces Staff College student body should, however, be corrected.



## CHART III-5—COMPARISON OF JOINTNESS IN STUDENT BODY

ACTIVE-DUTY OFFICERS FROM FOUR U.S. SERVICES

(Academic year 1987-88)

	Service by percent (number of students)										Total U.S. military students
	Parent		Army		Navy		Air Force		Marine Corps		
	%	(No.)	%	(No.)	%	(No.)	%	(No.)	%	(No.)	
Intermediate-level colleges:											
Armed Forces Staff College			43	(212)	19	(93)	30	(146)	8	(37)	(488)
Army Command and General Staff College	92	(704)			1	(3)	5	(40)	2	(18)	(765)
College of Naval Command and Staff	60	(97)	20	(32)			7	(12)	13	(21)	(162)
Air Command and Staff College	85	(384)	10	(44)	3	(13)			2	(9)	(450)
Marine Corps Command and Staff College	84	(123)	8	(12)	6	(9)	1	(2)			(146)
Senior-level colleges:											
National War College			34	(40)	24	(28)	34	(40)	8	(10)	(118)
Industrial College of the Armed Forces			36	(63)	23	(40)	35	(62)	6	(10)	(175)
Army War College	84	(181)			4	(8)	8	(17)	4	(9)	(215)
College of Naval Warfare	57	(98)	20	(34)			8	(13)	16	(28)	(173)
Air War College	81	(148)	11	(20)	5	(10)			3	(5)	(183)

Sources: Input from colleges.

Once again, the service colleges fall far short of the minimum standards the panel believes necessary for the non-JSO education required for all students by the Goldwater-Nichols Act. Those standards are: (1) *senior* service schools, 50 percent host service students and 25 percent from each other military department, and (2) *intermediate* service schools, two students per seminar from each of the other military departments (with three preferred).

Of the service schools, the Navy colleges have the best mixes of other-service students. Ultimately, however, the Air Force proportion at Newport should be increased significantly, and the Army slightly. The Army and Air Force schools, particularly at the intermediate level, are in far worse shape than the Navy. They lack adequate numbers of other-service students to teach a joint course effectively. At the Army Command and General Staff College, the large number of Army students in residence (704) makes it difficult for the other military departments to assign the requisite number of officers needed to achieve an adequate service mix in each seminar. It will take time to correct this problem, but both the Navy and Air Force, with 8 and 40 students respectively at Fort Leavenworth in academic year 1988-89, need to do better right away. The mix at the Marine Corps Command and Staff College should not be altered, however, until the curriculum is made more consistent with that of the other intermediate schools. Gradually, in order to comply with the implications of the Goldwater-Nichols Act concerning joint education for all PME students, the military departments must assign substantially more of their PME students to schools of another service.

Classroom observations validated that conclusion and influenced the panel's proposed service school standard. It was apparent that, as service officials had told the panel, the services are in general selecting PME students from among their most outstanding officers. When only one officer from another service was present in a classroom seminar, however, the panel observed that military con-

siderations important to employing the forces of his service were often not clearly articulated and sometimes overlooked. One explanation is that the officer's warfare specialty limited his or her ability to participate across the broad range of issues. In any case, the result was that classroom discussion of joint problems focused almost entirely on the parent service of the school. The panel concluded that greatly increased "other-service" representation is needed in the student bodies of service PME schools. Moreover, the panel believes that additional emphasis throughout the military on professional self-development, now strongly encouraged by the Chief of Staff of the Army and the Commandant of the Marine Corps, would improve the quality of the student bodies because entering students would be more knowledgeable. These observations also reinforced the panel's conclusion that joint specialist education should be taught in an environment in which the military departments are equally represented and service bias is minimized.

The panel also found evidence that the joint schools are victimized by service policies affecting the composition of the student bodies. The National War College provides a good example. The qualifications of students, in terms of rank and experience, have diminished dramatically over time. In its initial 10 to 15 years, students graduating from National were promoted to general and flag rank at a far higher rate than graduates of service war colleges. This phenomenon resulted from a consensus of the national security establishment that National was at the apex of the military education system, that its curriculum was tailored for those who would attain high positions of responsibility in policy and strategy matters, and that the joint education and socialization among its multiple agency students were healthy for both the services' and the nation's interests. Now the National War College is merely one of five equivalent senior colleges and receives an "equivalent share" of outstanding officers. The panel believes that present student selection policies undermine the rationale used both to justify the establishment of the college in 1946 and to maintain it through the years, are a disservice to the institution, and are not in the national interest.

The National War College is further disadvantaged by Navy assignment policies. Students at the National War College are selected by their service and are supposed to meet rank and previous schooling criteria established by the JCS. Generally, students have met those criteria, except for Navy students. In the past 2 years, Navy students have tended to be of a higher quality than before. But they continue to be junior to other students on average and to lack sufficient experience and prior education. In academic year 1987-88, for example, 7 of the 28 Navy students (25 percent) were "frocked" to the rank of commander to meet minimum rank criteria. ("Frocked" is the term for officers who wear the insignia of the next higher grade before they are officially advanced to that grade. See Chapter V for additional discussion.) Unlike students from all other services, Navy students have seldom attended a service command and staff college or AFSC, despite JCS guidance that such schooling is desired. This places the Navy students at a disadvantage compared to their classmates and affects their ability to participate fully in exercises and discussion. The net effect is less edu-

cation for the Navy students and less understanding of the Navy among other-service students.

Once again, the panel concludes that the nurturing and cultivation of the joint schools requires more attention by the joint institutions they serve, beginning with the Secretary of Defense and the Chairman, JCS.

#### CAPSTONE

The Capstone course, an element of the professional military education system that was established in the 1980s, was also reviewed by the panel because its purposes and the subject matter studied are inherently multi-service.

Capstone is a 6-week course for newly selected general and flag officers conducted four times a year by the National Defense University. It accommodates about 30 to 35 officers in each session. Initiated in 1983 as an optional 11-week course, it has since been cut almost in half. As a result of the Goldwater-Nichols Act, Capstone is now mandatory for officers selected for promotion to general and flag rank. The PME objectives of Capstone are established in JCS Staff Memorandum 189-4, March 23, 1984:

(a) Teach the issues of joint and combined operations through personal interaction with CINCs and other senior U.S. and allied commanders directly responsible for the planning and employment of joint and combined military forces.

(b) Teach key aspects of the national security environment, the intelligence support structure, service doctrines and capabilities; and joint and combined operational concepts, doctrinal issues and planning processes.

(c) Provide knowledge of major combat force acquisition issues; current defense programs, industrial base and related issues and concepts and their implications for the conduct of joint and combined operations.

The Capstone course is structured to achieve the following objectives:

*First week.* Introduction, executive fitness, and overview of the joint system.

*Second and third weeks.* Learning about other service capabilities as well as visits to unified/specified command and service headquarters within the United States. During this period, students travel nearly every day.

*Fourth and fifth weeks.* Class divides into three groups that travel to command headquarters and military facilities located outside the United States, either in Europe, the Pacific, or the Western Hemisphere. Each group also receives briefings from U.S. embassy officials in some of the countries it visits.

*Sixth week.* Class listens to and debates issues with senior retired four-star commanders, civilian defense experts, and Defense Department critics and participates in a 2-day exercise focused on joint force development and employment.

The Capstone program has no dedicated faculty. Rather, it relies on headquarters visits, guest lecturers, and "senior fellows." The latter are retired former commanders of unified or specified commands or service components who attend classes and accompany students on trips. Their role is to challenge student thinking on joint issues, interpret views presented during briefings and trips, and act as advisors and mentors.

The panel does not believe that the ambitious objectives established by the JCS are met by the curriculum and pedagogy of the current Capstone. During a session with the Capstone class in May 1988, the panel was told that significant socialization takes place in 6 weeks, with the result that students attain a much better understanding of the other services. But there were no comments about substantive issues of joint force doctrine, capabilities, and planning. Students attempted to convince the panel that anything more than 6 weeks of school at this level was inappropriate and unneeded. On the other hand, former graduates of Capstone described it as a "suitcase packing drill" and "one cocktail hour . . . followed by a second . . . followed by a third." John Collins, Senior Specialist for National Defense at the Congressional Research Service and a retired Army colonel, in testimony before the panel, stated his belief that Capstone is a "glorified charm school preaching the party line."

The shortcomings of the Capstone course are particularly unfortunate in light of the strongly felt need for increased flag officer professional education expressed by former service chiefs, unified commanders, and at least one former JCS Chairman. Two former commanders of the U.S. European Command illustrated the need for more and better flag officer education in discussing the Warrior Preparation Center in Germany, a wargaming center for senior officers and staffs. They stated that the Warrior Preparation Center began as an exercise for three-star corps commanders to train their two-star division commanders, but ended up as a training exercise for the corps commanders as well. In testimony, General John Galvin, the current U.S. European and Supreme Allied (NATO) Commander, described the transition from field grade rank to flag rank as "a very critical time in terms of his learning." He said "it is time for him [the general officer] to see the requirement for a broader outlook, more education, more learning, and more time for contemplation."

## CONCLUSIONS

As discussed in an earlier section, the Goldwater-Nichols Act requires (1) the Secretary of Defense and Chairman, JCS, periodically to review and revise the curricula of *joint* schools to enhance education and training in joint matters, and (2) the Secretary of Defense to oversee periodic reviews and revisions of *service* school curricula to strengthen the focus on joint matters and the preparation of officers for joint assignments. In this chapter the panel, in effect, presented its own review of the PME schools with respect to joint education using standards developed from testimony, interviews, visits, and material provided by the Defense Department. The

panel finds the current PME system inadequate to conduct effective joint education.

The service schools fall far short of any reasonable standards for the joint education they are required by law to include in their curricula for *all* students. The narrow service-oriented focus appears to be the product of several factors: limited student and faculty representation from the other services; the resulting shortage of expertise; lack of a body of joint doctrine and other material to support joint education; and, possibly, the inclination of the leadership of the service schools. The situation is unfortunate enough for students in the intermediate schools. It is unacceptable in senior schools because much of the subject matter—*theater operations, national military strategy*—is inherently joint and should have been recognized years ago as necessitating a substantial multi-service mix of both faculty and students for adequate learning to take place. Faculty and student mixes are crucially important to joint education. Students will gain little genuine understanding of the dilemmas inherent in employing joint forces in war without substantial representation from the other services in the classroom.

The National Defense University schools are closer to meeting panel standards for educating joint specialty officers. The faculty and student composition at the joint schools is ideal for studying joint operations, national military and national security strategy, and political-military affairs.

Beyond faculty and student body mixes, joint schools have the potential to fulfill the expectations of those who learned about jointness the hard way in World War II. The National War College provides an education in strategy and political-military affairs from a perspective higher than a theater commander's, more like that of the Chairman, JCS, or the Secretary of Defense or State. In the view of General Eisenhower and other senior officers who championed this school, military officers lacked this perspective during World War II. Service schools could not provide it. In the words of the JCS memorandum of June 22, 1945, "a joint institution, in which all components have equal interests, is essential." Such a joint institution cannot be controlled by "any one component, since each will be engaged primarily in its own field." Thus control by the Chairman is indicated for National War College. Similar considerations apply to the other joint schools.

The Department of Defense has recognized the inability of the present PME system to meet the Goldwater-Nichols Act requirements. At least two alternatives have been seriously considered. One would convert all service PME schools to joint schools. Another alternative would require each service school to include a special program of instruction in its curriculum (called a "joint track") for student officers nominated for the joint specialty and slated for a follow-on joint assignment. This alternative, however, appears not to address the legislative requirement for providing joint education to *all* officers in service PME schools. The panel has identified additional alternatives that deserve consideration. Chapter IV turns to the analysis of alternatives that would transform the 10 PME schools into a PME system capable of fulfilling its responsibilities.

## JOINT EDUCATION RECOMMENDATIONS

The Goldwater-Nichols Act, with its emphasis on the imperatives of joint warfare and the consequent strengthening of joint institutions, demands a reappraisal of the direction in which professional military education has evolved since World War II. The panel's review of the evolution of PME indicates the necessity of a return to historical roots. The joint schools should return to the premier position they held in the early postwar years.

### SUBSTANCE OF JOINT EDUCATION

1. For the purposes of professional military education, "joint matters" should be defined to include:

(a) The elements contained in the Goldwater-Nichols Act.

- Integrated employment of land, sea, and air forces.
- National military strategy.
- Strategic planning.
- Contingency planning.
- Command and control of combat operations under unified command.

(b) Several other subjects subsumed in the elements contained in the Goldwater-Nichols Act definition.

- Joint and combined operations.
- Joint doctrine.
- Joint logistics.
- Joint communications.
- Joint intelligence.
- Theater/campaign planning.
- Joint military command and control systems and their interfaces with national command systems.

(c) Joint force development, including certain military aspects of mobilization.

2. For joint education to be meaningful and productive, a prerequisite for officers is competence commensurate with their rank in all elements of *their own service* in professional knowledge and understanding (e.g., in the Navy, surface *and* aviation *and* subsurface) as well as demonstrated performance. Also an integral part of joint education is an officer's study of the *other services*.

3. The service intermediate schools should teach both joint and service systems—organizations, processes, procedures, and staff skills—to all students. This is necessary to meet the Goldwater-Nichols Act requirement to revise the curricula of service schools to strengthen the focus on joint matters and prepare officers for joint duty assignments.

4. The Armed Forces Staff College should concentrate on case studies and war games on the combat employment of joint forces, as did the Army-Navy Staff College in World War II. The development of solutions to joint warfighting problems in a joint environment is the best way to teach joint perspective.

5. The Chairman, JCS, should assign the joint schools a major share of the responsibility for developing joint doctrine and related joint knowledge.

## FACULTY

6. The mix of military faculty from each military department is a key factor in joint education. In schools that educate joint specialists, the standard should be equal representation from each of the three military departments. For other schools, representation from each department should eventually be substantially higher than today. These standards should apply to the entire active duty military faculty, not some fraction designated as a nominal "joint education" department. (See Chapter IV for specific panel-recommended standards.)

7. Ideally, each military member of a joint faculty should have completed the intermediate service and joint schools and have had joint duty experience. In future years, joint specialist education should increasingly be taught by fully qualified JSOs. The faculties at the joint schools should be at least comparable to those at the best service schools in terms of experience, educational background, promotion opportunity, academic stature, and student/faculty ratio.

## STUDENT BODY

8. The mix of students from each military department is another key factor in joint education. In schools that educate joint specialists, the standard should be equal representation from each of the three military departments. For other schools, representation from each department in the entire student body should eventually be substantially higher than today. In addition, the student body mix should consist of students of *equally* high caliber from each military department. Finally, each service should provide a representative mix of students from all combat arms branches and warfare specialties. (See Chapter IV for specific panel-recommended standards.)

9. The Department of Defense should use the following prerequisites as a guide for selecting joint specialist nominees for joint education: top quarter of their year group, competent and experienced in their own service, high intellectual capacity, basic understanding of the mutual interdependence of the services, and broad education. Students attending joint specialist education should have attended a service intermediate school.

## JOINT CONTROL

10. The Chairman, JCS, should control the joint schools and the joint portions of the service schools by Secretary of Defense direction. Schools that educate joint specialists should be responsive to the needs of the Chairman and, through him, to the commanders of the unified and specified commands. Curricula should change if deficiencies in the knowledge or abilities of the schools' graduates are identified. The Chairman, JCS, should revise faculty and student selection criteria and policies as necessary to ensure high quality for joint education. The joint school commandants should periodically report on the effectiveness of the criteria and policies.

11. The Secretary of Defense and the Chairman, JCS, should take a more active role in overseeing the joint curriculum and faculty of

each service PME school, recognizing that service missions should remain the principal focus.

#### JOINT SCHOOLS

12. Joint specialist education should be conducted in schools that are genuinely "joint;" that is, in an environment in which the military departments are equally represented and service biases minimized, and in which the joint curriculum is taught from a joint perspective—that of the Chairman of the Joint Chiefs of Staff, a commander of a unified command, or a contingency joint task force commander at the 3-star level.

13. The joint schools of the National Defense University require more attention by the joint institutions they service. The NDU schools essentially meet panel standards for faculty and student mix necessary to educate joint specialty officers. The faculty and student composition at the joint schools is ideal for studying joint operations, national military and national security strategy, and political-military affairs. The joint schools have the potential to fulfill the expectations of those who learned about jointness the hard way in World War II. In comparison with service colleges, however, the joint colleges have small faculties and high student/faculty ratios. The joint schools should have sufficiently low student/faculty ratios to permit faculty members to assist in the development of joint doctrine and to create teaching materials on joint subjects for use in both joint and service schools. As a minimum, student/faculty ratios and resources devoted to the joint schools should equal those at the Army, Navy, and Air Force PME colleges. The service chiefs should contribute by providing more high-quality officers with joint, operational, and subject-matter expertise.