
Prospects for Military Education

By LEONARD D. HOLDER, JR., and WILLIAMSON MURRAY

Michael Howard has suggested that the profession of arms is the most challenging not only in physical terms but in the intellectual demands it places on military leaders. Because officers can only authentically pursue their profession at distinct intervals, frequently measured in decades, they confront a difficulty unique among the professions. In periods of peace they must think about and prepare for something that for the most part cannot be replicated outside war. Thus professional military education (PME) will be pivotal in determining the effectiveness of the U.S. Armed Forces in the next century.

PME is in disarray. There is no clear understanding of how to prepare combat leaders or

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forces. This bodes ill for our ability to deal with an uncertain future in which war is sure to occur. Current and foreseeable conditions demand Joint Staff officers who are stronger, more innovative, and more competitive and joint force commanders who are better prepared. The progress made by PME institutions over the last decade is only a start. Each service and the Joint Staff must improve academic standards and the way senior leaders are selected, developed, and assigned. Accordingly education must become a regular activity for career officers. Though one cannot expect officers to study continuously while serving in line assignments, they should be required to meet established learning objectives at each stage of their careers.

The Historical Framework

Education has historically played a major role in preparing military institutions for war and in providing states and alliances with potent instruments of strategic power. At best it has engaged and stimulated students, taught them standard practices, and encouraged innovation and realism in decisionmaking during the stress and confusion of battle. At worst it has been considered a break in the midst of busy careers, a chance to relax and make acquaintances among peers.

Serious PME began after Prussia's catastrophic defeat at Jena-Auerstadt in 1806. Having seen their army and state overwhelmed by Napoleon in a single day, Prussian military reformers created a program to educate a small group of officers who could provide a systematic and coherent approach to war. Those officers were crucial to Prussia's recovery and to France's defeat in 1815. Nevertheless in the ensuing years the new educational system came under attack from conservative officers, who ignored the lessons of the past and argued that what had been good for Frederick the Great was good for the Prussian army of the 19th century.

However, in the fifty years after Napoleon's defeat enormous technological changes took place in weapons, communications, and transport which revolutionized warfare. Prussia, with its unique system of military education, had the only European army that grasped the full significance of the changes. In 1866 and 1870, under Helmuth von Moltke, chief of the general staff, Prussia fielded much larger armies than Napoleon and defeated Austria and France, which led to German unification. In 1864 a Prussian commander, on receiving orders from Moltke, was reputed to have responded, "Who is this General von Moltke?" After 1866 and 1870 no one had to ask.

Moltke's victories offered such compelling evidence of superiority that the Prussian model was copied in all major European armies and several in the new world. Staff colleges proliferated across the continent. Their purported aim was to

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U.S. Army War College.



U.S. Army

prepare students for the complexities of war in an age of technological change. For some, PME laid at the heart of institutional values. Membership in the great general staff was the surest path to success and depended on being graduated from the *Kriegsakademie* with its notoriously high standards. In other armies the substance of PME varied; only an extraordinarily embarrassing performance in the strategic debates of 1911 forced the Royal Navy to get into the business of professional military education.

A number of influences led to increased interest in the subject in the United States at the end of the 19th century. The impressive, effortless Prussian victories of 1866 and 1870 supported the arguments of reformers such as William Tecumseh Sherman and Emory Upton that it was essential to military effectiveness. But the benign security environment of the day removed all urgency from the issue of educational reform. At the turn of the century, however, two new factors sped it up. The first was the increasing identification of professions such as law, medicine, and engineering with educational preparation. Officers realized that to be considered professional they would have to institute a substantial program of education. Second, the Spanish-American War revealed major deficiencies in military organization

and introduced imperial commitments which demanded study. Americans, least of all their military, could no longer hide behind notions of isolationism.

By the outbreak of World War I, every major power had adopted education as a component of military professionalism. The quality of education varied widely; none accurately assessed the warfighting potential of industrial nations. World War I underlined how much had to be learned. In the shadow of a disastrous conflict marked by a low degree of effectiveness, military institutions returned to peace in 1919. They then confronted a host of tactical and operational questions posed by the war, as well as the fact that technology increasingly affected how well militaries performed in combat. The innovations and adaptations of the interwar period were crucial in determining how they performed in World War II. In America a significant determinant in the innovation process lay in the quality of officer education. For France the study of 1914–18 degenerated into a self-vindicating review of battles that showed the army in the best light. Education, experimentation, and training justified the thinking of the army leadership. Even then, General Maurice Gamelin, who headed the French army in the late 1930s, felt threatened enough to demand that colleges and journals reflect the beliefs of the high command: debate was simply not allowed.

Germany followed a different path in the post war period. The victors demanded that the army chief, General Hans von Seeckt, drastically reduce the officer corps and forces. He complied by placing the general staff and its educational system (admittance to the staff could only be gained by examination and attendance at the *Kriegsakademie*) in control of senior army positions. Access to command depended almost as much on intellectual as command performance. Thus the Germans thoroughly examined the tactical and operational lessons of the last conflict and translated them into coherent, flexible doctrine. The *Kriegsakademie* ensured that future general staff officers (and the rest of the army) understood that doctrine.

But it was not only Germany that used education to innovate effectively and intelligently in the face of complex technological and tactical change. In the United States, the Naval War College played a crucial role in developing carrier aviation. Under the leadership of Admiral William Sims, it was blazing a trail for carrier innovation before the Navy had a single carrier. Similarly Army schools, including the Infantry School at Fort Benning, U.S. Army Command and Staff College, and U.S. Army War College, all helped create an adaptive and innovative officer corps.

Underlining the importance Americans placed on education was the fact that a number of exceptional officers who played leading roles during World War II served on the faculties of PME institutions. Raymond Spruance served two tours at the Naval War College; Richard Kelly Turner and Joseph Reeves also taught at Newport. At the U.S. Army War College in Washington, out of seven instructors for academic year 1939–40, two were to hold major commands in World War II, W.H. Simpson as commander of Ninth Army and J. Lawton Collins as corps commander. During the next year, Alexander Patch, a future Army commander, was on the faculty. Both the German and American interwar experiences suggest that investments in intellectual excellence can pay dividends in the next war.

Despite the tributes U.S. military leaders lavished on the role of PME in preparing them for World War II, education fell into decline after the war. The Cold War with its monolithic dependence on nuclear weapons, which required little adaptation, was one reason. With a constant threat, there was less cause to study the complexities of strategy and war, particularly given the fact that America emphasized deterrence rather than combat. Moreover, a generational shift in the 1950s brought the junior officers of World War II to command positions. They had joined the military in the 1930s and gone to war as lieutenants and captains without receiving PME and returned home as colonels

and generals. As a result, many discounted the role of PME in military professionalism.

By the late 1950s the services had allowed professional military education to drift. Branch and basic schools remained generally effective, but staff and war colleges varied in quality. Most had no academic focus. Since the services gave them no clear directions, their faculties and leaders justified almost any subject for the curricula. The colleges were also plagued by personnel systems that refused to make hard choices. Thus student bodies were too large for in-depth teaching while the focus of many programs had nothing to do with war. As one senior Marine officer summed up his experience at the U.S. Army War College in the early 1980s: "Since you studied law when you went to law school, and medicine when you went to medical school, I believed that I would get to study war at the Army War College. Boy, was I wrong!"

The war colleges reflected one of the worst aspects of American education in the 1960s that destroyed the Nation's universities and colleges. Students neither took exams nor received grades. The only exception was the Naval War College. In the early 1970s the Chief of Naval Operations assigned a tough-minded young admiral and former Rhodes scholar to Newport to "fix the place." Stansfield Turner understood that a year was not long in educational terms and suggested:

War colleges are places to educate the senior officer corps in the large military and strategic issues that confront America in the late twentieth century. They should educate these officers by a demanding intellectual curriculum to think in wider terms than their busy operational careers have thus far demanded. Above all the war colleges should broaden the intellectual and military horizons of the officers who attend, so that they have a conception of the larger strategic and operational issues that confront our military and our Nation.¹

The outcome of the Turner reforms was that Newport acquired a first-rate curriculum and instructors, and a reputation for intellectual excellence in teaching strategy and defense policies that major universities might envy. Yet there remains one substantial problem: the Navy still refuses to send its best officers to either the staff or war colleges at Newport.

The Current State of PME

The Panel on Joint Professional Military Education of the U.S. House of Representatives, chaired by Congressman Ike Skelton, issued a devastating report in 1988 on the lack of intellectual

rigor and quality at PME institutions. Given this criticism, one might think that the services would have made substantial improvement over the past decade. There has been some progress, but most reform has been hit or miss. While almost everyone pays lip service to it and college commanders confer regularly, PME in general is under-resourced, uncoordinated, and unproductive.

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at the intermediate level of PME by the Army, Marine Corps, and Air Force. The Army led the way by creating the School of Advanced Military Studies (SAMS) in 1984, which marked the maturation of the internally driven reconstruction of the Army in the wake of Vietnam. Coming after doctrinal debates during the late 1970s, SAMS represented a new seriousness about doctrine and education, but its form also constituted an admission of serious flaws in standard Army schooling.

Caught between the desire to teach military art on a sophisticated level and to provide broad brush exposure to staff college education for half of its officers corps, Army leaders opted to avoid

U.S. Army Training and Doctrine Command (TRADOC) launched SAMS as an optional course for volunteers who completed the standard staff college program. The aim was to attract the brightest from the core combat specialties to examine the present and future of their profession in an intense, graduate level course, equipped with an understanding of the process based on the first year of study at Fort Leavenworth. In effect, the creation of SAMS was a tacit admission that the regular intermediate level program was not serving the needs of commanders in the field.

By limiting enrollment to fifty, SAMS accepted only officers with a conceptual aptitude for the study of operations. Admission was by application, competitive exam, and interview—which insured only the best attended. A substantial reading load, scrutiny by a permanent seminar leader, and written and oral examinations also guaranteed the quality of the program. Within five years, well before the publicity gained by graduates in planning the Persian Gulf War, SAMS established a reputation for intellectual rigor. By the early 1990s the Marine Corps and Air Force had instituted similar programs: the School of Advanced Warfighting at Quantico Marine Corps Base and School of Advanced Airpower Studies at Maxwell Air Force Base. Both followed the SAMS example by emphasizing the study of war, operations, and the profession of arms.

Advancements in staff college education have been most noticeable at Marine Corps and Air Force institutions. The Marines have recruited civilian faculty members and also organized a small war college to feed lieutenant colonels into teaching assignments at the staff college. The Air Force has also improved its staff college, particularly the curriculum. The experience of both institutions suggests that it is possible to significantly improve PME without unlimited resources, but it does emphasize the important role of command interest.

Nevertheless, there are substantive issues that are not being addressed. The most obvious is the composition of student bodies at the intermediate level. Currently about half of the eligible Army and Air Force field grade officers attend staff college—a high percentage compared to similar colleges in other nations. Additionally, in the past decade both services have considered putting every major through a resident program, the Army by augmenting its ten-month program with two shorter but equivalent courses and the Air Force by reducing its program to six months. Neither of these approaches has merit if one believes that the purpose of the staff college is to educate



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Marshall Hall, National Defense University.

any basic change. The standard staff college program was continued, mass-producing graduates thoroughly versed in staff processes and broadly acquainted with tactical doctrine. With doctors, lawyers, and finance officers spread throughout the class, course work aimed at the median group. In essence the college taught tactics for chaplains and administration for infantrymen.

The Professional Military Education (PME) Framework and the Program for Joint Education (PJE)					
Grade	Cadet/ Midshipman	0-1/0-2/0-3	0-4	0-5/0-6	0-7/0-8/0-9/0-10
Level of military education	Pre-commissioning	Primary	Intermediate	Senior	General/Flag
Educational institutions and courses	Service academies Reserve Officer Training Corps Officer Candidate School/Officer Training School	Continuing professional military education			
		Basic and advanced branch or warfare specialty schools Primary level PME courses	Army Command and General Staff College College of Naval Command and Staff Marine Corps Command and Staff College Air Command and Staff College	U.S. Army War College College of Naval Warfare Marine Corps War College Air War College	<ul style="list-style-type: none"> • Capstone Course • Seminars/courses
				Industrial College of the Armed Forces National War College	
	Armed Forces Staff College	 Full PJE  PJE Phase II			
Level of war emphasized	Conceptual awareness	Tactical		Operational	
		Strategic			
Focus of military education	Introduction to service missions	Warfare specialty/branch operations Service values Leadership Staff skills	Theater level operational art Combined arms/composite warfare Introduction to national military strategy and national security strategy	<i>Primary emphasis:</i> Service schools: national military strategy Joint schools: national security strategy	Theater level joint and combined operations Synthesis of national military strategy with national security strategy Synthesis of national security strategy with national policymaking requirements
Joint emphasis (PJE Phase I at senior and intermediate levels)	Joint introduction <ul style="list-style-type: none"> • history • purpose • overview 	Joint awareness <ul style="list-style-type: none"> • organizations • missions • interservice relationships 	Joint forces and operation level of war Organization and command relationships Joint command, control, communications, and intelligence Defense planning systems	National military capabilities and command structure Joint doctrine Joint planning Introduction to joint/combined operations Campaign planning Joint/combined warfare (theater context)	
Focus of PJE Phase II (National Defense University only)	Not specified for these levels		Application of knowledge gained at Phase I Joint doctrine Joint planning (deliberate/time sensitive) Defense resource management Joint staff operations Integrated employment/deployment of multiservice forces Joint war game/crisis action and joint planning exercises		

future leaders—the strongest members of the officer corps—in complex and difficult concepts.²

The staff colleges aim at little more than inculcating established techniques and some degree of literacy in service and joint doctrinal issues. Save for the Naval War College, senior colleges perform the same task on the strategic level. Accountability for learning objectives does exist,

and electives offer the means for studying narrower tactical, operational, and strategic issues; but those objectives are modest and the learning standards are unambitious.

Not surprisingly the exception to this generally bleak situation is joint education. Curricula

Marine Corps
War College.



U.S. Marine Corps

have been examined and standardized thanks to the Goldwater-Nichols DOD Reorganization Act of 1986. Moreover, accreditation inspections by teams chartered by the Joint Staff assure that the colleges meet standards for teaching, learning, and staffing. But a larger problem remains. The entrenched assumption—often encouraged by senior officers—that learning is secondary to recreation, family time, and networking, is an obstacle to academic rigor. And for the most part, service personnel systems do not make tours on the faculties of PME institutions a priority.

In most cases course organization and content satisfactorily prepare students for their next assignments. Colleges teach deliberate planning well, but at the expense of crisis-action planning. Conventional combined arms operations which follow an unopposed deployment—or assume that one has already occurred—remain the model. The curricula introduce ideas on asymmetric threats, homeland defense, and unconventional operations, but only in passing. The overall content and educational approach conform to the view that PME is mainly a chance for hard-working officers to rest and concentrate on their next assignment. Yet the testimony of World War II leaders speaks convincingly to the criticality of education in the interwar years. Now as then, the services should make the most of the opportunity to prepare officers to meet the challenges of a dangerous future.

The war college scene today is much the same as when the Skelton report surfaced. These institutions can vacillate between energy and lassitude depending on their leadership. For example, the Air University brought in first-rate academics and initiated curricular reforms in the early

1990s. But because of the short tenure of its leaders—a problem common to all PME institutions—much of that initiative has gone astray. Similarly, the aims and policies of the U.S. Army War College drift between commandants. In general it suffers from an ingrained student belief that attendance is a reward for past performance and an opportunity to relax with families and build new friendships. One commandant was dissuaded from implementing tougher standards by his deputy, who argued that academics should claim no more than a third of student time.

Naval colleges still suffer from the conviction of their leaders that their best and brightest have no time to attend. Although the Navy has improved academic staffs and facilities at Newport, it sends few of its top officers to its own war college. Finally, the National War College has made some changes recommended in the Skelton report and benefits from its proximity to the Pentagon. But it suffers a malaise similar to that of the U.S. Army War College; and it has difficulty obtaining needed resources because its funding is buried within the Army budget.

The contrast between the American and the British and German PME systems could not be more striking. To begin, these two allied nations admit far fewer officers. They allow only those at the top end to compete for places at staff college and demand that they gain entrance by completing rigorous courses or exams. Then they subject students to a two-year program. Course content varies with national aims and strategic conditions, but all stress theory and history and also use standard approaches to problem-solving, staff procedures, and command techniques. A recent trend in foreign staff colleges has been to experiment with joint education. Germany has collocated its three staff colleges in Hamburg, where students from all services occasionally share courses or cooperate in exercises. The British are making the most ambitious effort by eliminating service staff colleges and forming a single joint school.

Given extensive and exclusive staff college programs, Britain and Germany have no need for war colleges. The only significant exception is the British Higher Command and Staff College. More war than staff college, it enrolls 25 officers (O-5s/O-6s) from each service in a short, intense, and stimulating 90-day program. It stands in stark contrast to the Capstone Course offered at the National Defense University for general and flag rank officers. Taught at Camberley, the British course features serious academic work, frank personal assessments, and exposure to policymakers and civilian experts in areas of strategy and operational art. Most significantly student performance matters. Class standing and individual records affect subsequent assignments.

Graduation day,
National Defense
University.



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Turning to the Future

After national defense, the most critical task for service colleges is to produce imaginative, adaptive commanders and staff officers. Their for-

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mation must knit line assignments, supporting assignments, and professional education into a system to prepare them for greater responsibilities. If officers spend no more time in residence than at present, then the colleges must become more productive and career officers will have to augment classroom attendance with learning on the job. Consequently, officers must study their profession throughout their careers, and education must become a concern of operational commanders as well as the colleges. Services must pay considerably more attention to PME, reward those involved, demand more of students, and encourage intellectual growth in the profession of arms.

Improving PME to the required level means concentrating on the proper subjects, the right students, first-class faculties, and effective teaching. Then joint and service leaders must rearrange curricula and develop objectives at every stage of an officer's career. Because some education will have to be accomplished during line assignments,

the services will have to develop well-conceived nonresident programs that apply the best teaching technology to realistic learning goals. Finally, a uniform accreditation system similar to that used to monitor joint PME would materially assist the services in sustaining high quality education and managing change.

Resident programs at both staff and war colleges must remain the most important means of educating leaders. Instruction should begin on a higher plane, though every student would have to arrive better prepared. Curricula and faculties could then use classroom time to stretch the horizons of students by forcing them to solve problems several levels above their rank and to think about the full spectrum of operations. As a start, colleges must overcome their tendency to remain close to the familiar, wherein they teach predictable situations that exist only in residence. Courses at staff colleges that ingrain standard processes absorb time required for advanced tactics and operations. The rudiments of campaign planning and joint procedures are parallel subjects at the war colleges. Quite simply, staff and war colleges must condense their treatment of basics and spend more time on the art of war.

Those officers who aspire to attend PME institutions should learn the fundamentals during

Naval War College.



U.S. Air Force

U.S. Navy

their primary duty assignments and by self-development and demonstrate mastery of those subjects before admission. This would clear the way for more varied and substantial study of service and joint operations. In order to adopt such an approach the college programs would have to become more coherent and comprehensive. Resident programs would retain their basic responsibilities but narrow their curricula to operational and strategic essentials while improving their academic status. To teach on the proper level, service and joint institutions would need to administer developmental programs for their leadership between PME assignments. Thus nonresident staff and war college programs should seriously prepare officers for future assignments (including education) rather than being a pale imitation of resident programs.

Curricular design and administration would keep faculties at about their present size while more junior officers performed routine chores as senior faculty members teach. That would result in a diminished resident enrollment and an enhanced level of education. Smaller faculties would mean better teachers while smaller student bodies would mean greater attention for each student.

The services must also abandon methods for student selection which depend solely on officer files (or detailee convenience). Instead, prospective students should demonstrate professional growth in their careers since last attending a PME institution. In particular, they should display an improved knowledge of service competencies as well as a deeper understanding of joint matters. Requiring officers to qualify for attendance at the staff and war colleges would shock the officer corps at first, then stimulate great improvement.

Under this approach two important events would precede board selection for education. First, those officers who met the prerequisites—both experiential and nonresident—would take the initiative by applying. Second, they would qualify by passing entrance examinations that, if failed, could be retaken after one year. That would simplify the work of boards by considering only those who met established criteria. This fundamental change would induce a substantial improvement in officer performance and PME quality. Instead of relying solely on assignment patterns, reputation, and fitness reports, the system would compel officers to study their profession to insure admission to college and eventual promotion.

The traditional objection to entrance exams for resident programs has been that emphasizing test scores detracts from the value of demonstrated field abilities. In fact, these two considerations should be mutually reinforcing. Certainly study stimulated by the need to qualify for admission to resident programs would improve the intellectual capacity of the officer corps. Moreover, it would broaden the horizons of line officers by exposing them to issues beyond the scope of their current duties. Questions about admission criteria or the weight that selection boards should attach to test results remain open. But testing on each level of development would allow those officers who fail to be selected for staff college to remedy their educational deficiencies and compete for war college. This second opportunity would encourage limiting of the field to those who were chosen for the previous course.

Recruiting expert faculties is no less important than selecting students. Civilian universities devote considerable resources to building strong faculties. Today only the Naval War College has sought to attract the best academics in areas such as strategy and national security decisionmaking. This raises two issues. On one hand, PME institutions should hire some of the best from academe to teach strategy, historical case studies, and national security affairs (areas which most universities entirely ignore). But serving officers—after graduate preparation—can bring military expertise to teaching specialized subjects. Ironically, the Army and Air Force send some of their most qualified officers to leading graduate schools for two years in order to build the faculties of their respective military academies—to prepare cadets who will not become general officers for over two decades. Yet at the staff and war college level, military faculty members have all too often not been afforded any preparation for teaching.

With the exception of the Marine Corps the services have been unwilling to reward officers who serve on the faculty of their staff and war colleges. Operational billets at training centers, on joint and service staffs, and in directed assignments (Reserve components, recruiting, and ROTC) take precedence over faculty assignments. The low priority attached to teaching and the tendency of promotion and command selection boards to ignore or even penalize teaching experience mean that few officers seek such assignments. This indifference does not preclude some talented people from serving on faculties, but it does not reward them. Teaching at a PME institution thus receives little emphasis from assignment detailers and tends to attract officers who either prefer teaching to field work or have missed selection for more prestigious positions.

Just as Goldwater-Nichols required sending a specified number of officers with joint experience to PME institutions to teach joint issues, the services would benefit by assigning outstanding officers to staff and war college faculties. Other possibilities include establishing policies that link faculty duty to first-line operations jobs. The services might earmark a certain percentage of majors and lieutenant commanders in primary staff positions with line units for teaching at their staff colleges. The first assignment for a number of line officers in those ranks might be to educational positions (perhaps even after completing graduate school). Putting future flag officers in classrooms where their ideas would be challenged might suggest to them that rank does not always confer wisdom.

More ambitiously faculty could be picked by selection board or name, which is the practice at leading foreign institutions. Both the *Führungsakademie* in Germany and the Higher Command and Staff Course in Britain select their faculty members from among the most outstanding officers available. Assignment as a syndicate leader at a German staff college is considered a high-prestige post that usually presages promotion to flag rank.

Two other foreign practices which warrant examination would counteract the loss of talent that comes with American military personnel policy, namely the twenty-year retirement and thirty-year service cap. The German army permits longer service in the first place, but it also recognizes its most talented colonels who are not going on to flag rank by giving them added pay and status. Although the *Bundeswehr* does not assign such officers to teach, our Armed Forces could employ distinguished colonels with operational expertise and academic credentials to provide stability and depth to staff and war colleges. Similarly, a few senior flag officers might be extended on active duty to lead PME institutions and serve as distinguished faculty members. Obviously the number of these colonels and flag officers should be limited and selections carefully made. Superannuation and loss of relevance come inevitably to all. Yet, assuming that such assignments were normative and that all selected officers were acknowledged experts, the change could only improve faculties. The Armed Forces should follow the Marine model and allow greater flexibility in assignments and career paths open to officers. In fact, any substantive PME reform demands wholesale revamping of personnel systems which were designed in the aftermath of World War II.

Both class size and composition are important parts of the PME equation. Selection rates as high as 50 percent to intermediate level colleges

officer course significant weight in determining future joint assignments.

selection rates as high as 50 percent to intermediate level colleges reduce student and faculty quality

reduce student and faculty quality. Here again the Marines set the example by limiting the number of officers who attend staff or war colleges. In addition, improving teaching methods and academic standards comes with meaningful reform.

The technical and material dimensions of PME are less controversial. Simply put, staff and war colleges are falling behind in a period of high-tech instructional aids and automated operations. As a result PME institutions are not as effective in teaching and also are becoming ever less capable of demonstrating the full operational picture used in operational command centers to their students. Introducing better tools (such as interactive self-development programs, low overhead simulations, digitized references, computer-assisted instruction, and collaborative distributed workstations) will enhance curricula. It can improve faculty awareness of student progress and the pace of learning. The Total Army School System illustrates what can be accomplished through distance learning. It is focused on the Reserve components but clearly promises improved access to basic courses.

Improved simulation would not only relate the true range and complexity of operations but also represent combat effects more accurately. One must understand current simulation capabilities to recognize the flawed picture they paint. Simulations can teach false relationships and capabilities (weapons such as attack helicopters and field artillery rockets) and leave human factors (fatigue, training status, and confidence) largely out of the equation.

Testing simply offers a means of reinforcing academic standards. Adopting end-of-course tests could vastly improve concentration and education. Making graduation contingent on passing tough oral and written exams and entering the results in officer records will ensure better learning. Moreover, the top 10 to 15 percent in each class should be selected for choice assignments through service personnel systems. Performance should play a significant part in promotion to flag rank.

Finally, the Armed Forces would benefit by replacing the Capstone Course with a program resembling the British Higher Command and Staff Course as recommended by the Skelton report. Serious competition could be initiated by giving the individual performance of students in the flag

General William DePuy, the first TRADOC commander, frequently pointed out that "war is the great auditor of military institutions." A reckoning for professional military education is sure to follow the next great national challenge. Getting the system right is imperative. A better approach would combine resident programs for fewer students with accountable self-development objectives for officers of all specialties. Interservice faculties would offer separate courses for professionals in law, medicine, or administration which might lead to greater commonality in the Armed Forces. Short courses for special duties would augment the standard courses.

The history of military innovation and effectiveness in the last century suggests a correlation between battlefield performance and how seriously military institutions regarded officer education. It is essential that the services devote substantially more resources to that end. Moreover, staff and war colleges have similar aims: the study of past, present, and future war, the study of strategy and the conduct of military operations, and the thoughtful preparation of forces within the joint arena. To meet the challenges of the 21st century, the Nation must have officers who are not only in peak physical condition but are intellectually the finest in the world at the profession of arms. That only can be achieved by a far-reaching reform of professional military education. **JFQ**

NOTES

¹ Quoted in Williamson Murray, "Grading the War Colleges," *The National Interest*, no. 6 (Winter 1986-87), pp. 12-19.

² A related issue is the inclusion of non-tactical officers. Although a few doctors, lawyers, chaplains, and finance officers should attend in anticipation of future service with tactical units, the number now enrolled exceeds requirements and dilutes the focus on the senior level. This is not to say that these officers should not receive equivalent mid-level education, but rather that they should study their specialties more directly in their branch schools or in civilian professional schools.