



Future leaders in the schoolhouse.

The Revolution in Military Education

By RICHARD A. CHILCOAT

What impact will rapid change of today have on professional military education (PME)? The answer is that it will be dramatic. Moreover, the revolution in military affairs (RMA) suggests a corresponding revolution in military education which transforms the who, what, when, where, and how of PME. Military education, especially joint professional military education (JPME), must be seamless, continuous, and career-long. It must be needs-based, available on demand, and offered just-in-time. It must be more information technology-based (even network-centric) as well as more experiential and virtual. And it must be fused with operations, integrate resident and nonresident instruction, and appeal to both military and civilian components as well as international institutions. These are the features of a revolution in military education, and it is underway.

A Tradition of Leading

PME must keep abreast with the times—it must lead, not lag behind change. This has traditionally been the case. The war colleges were engines of change for industrial age warfare at the turn of the last century. After its founding in 1903 the U.S. Army War College developed the military leaders who mobilized and commanded massive land forces of unprecedented effectiveness and efficiency in two world wars. During the 1920s and 1930s American fleets crossed the Asia-Pacific region to engage the Japanese 127 times in wargames held at the Naval War College. As Winston Churchill once commented, World War II was won at U.S. war colleges in the interwar years.

The National War College illustrates the contributions by PME institutions to national strategy and policy and to joint and multinational operations. The results were readily seen in Desert Storm. Generals John Yeosock and Chuck Horner, the land and air component commanders in the Persian Gulf War, were fellow students in the class of 1976 at the National War College, as was General Colin Powell, the Chairman. The graduates of

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Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 1999		2. REPORT TYPE		3. DATES COVERED 00-00-1999 to 00-00-1999	
4. TITLE AND SUBTITLE The Revolution in Military Education				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Defense University, Institute for National Strategic Studies, 260 Fifth Avenue SW Bg 64 Fort Lesley J. McNair, Washington, DC, 20319				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



U.S. Air Force (Jose Lopez, Jr)

Classmates reunited—Powell (seated) with Horner and Yeosock (standing) in the Persian Gulf, 1990.

the Industrial College of the Armed Forces, Armed Forces Staff College, and other PME institutions have made similar enduring contributions.

Our PME system is the model for the rest of the world. In fact, many United Nations and NATO officials have indicated that senior U.S. commanders in the Balkans have provided the most creative approaches to problems that frustrate civilian managers.

Moreover, professional military education is even the envy of corporate and industrial leaders. But we cannot allow PME to simply maintain the status quo. It must

make the transition to the information age in the same way as our operational forces and in the process provide leadership for change.

Factors of Change

Leading change has always been hard and is getting even harder. This is evident when one compares the past with the present. In the 17th century it took nearly two years for Europeans to send a message and receive an answer on affairs in India or the Far East. The industrial revolution took place over centuries. In addition, a geographically secure United States was once able to contemplate whether it should engage in a conflict on another continent. In the agrarian and industrial ages, there was time to investigate and reflect on the course of change.

But change today is accelerating and making the future more unpredictable. Information is transmitted around the world in a matter of seconds. Last year globalization enabled the economic crisis in Asia to spread to Russia and Brazil.

JPME must evolve through a learning process that combines continuity, change, renewal, and growth

In May 1998, regional dangers emerged when India and Pakistan tested nuclear devices. Asymmetric threats are likely to challenge the U.S. homeland, once regarded as reasonably secure.

The information age is characterized by the compression of time. This is already reflected in planning and decisionmaking. At one unified command, technology has cut the time needed to develop contingency plans from seven days in 1994 to two hours today. Leaders no longer have time to digest the nuances of rapid, widespread change. They must deal with the increasing speed, ambiguity, and complexity of change that is occurring now and that can be anticipated in the

future. As the head of planning for Royal Dutch Shell, Arie De Geus, observed, “The ability to learn faster than your competitors may be the only sustainable competitive advantage.” The principle applies as well to the battlespace of tomorrow.

Rapidly accelerating change has implications for PME. Institutionally, we must continue to learn-how-to-learn and become a learning organization that creates a special climate. We must strike a balance between learning and controlling, and the learning must occur proactively and generatively. Additionally, a learning organization must foster shared vision, situational awareness, and empowerment of people. This kind of organization generates its own future and leads the pace of change.

JPME must evolve through a learning process that combines continuity, change, renewal, and growth. It must maintain our traditional qualities of excellence, capitalize on change, enable our continual renewal, and achieve growth even when resources are constrained.

Necessary Competencies

It is not enough for JPME simply to enable our graduates to adapt to the future. They must also be capable of creating ideas and initiating actions that enable them to generate their own futures. The Chairman of the Joint Chiefs of Staff Review Panel Report in 1995 outlined the competencies that war college graduates will need through 2010. It recommended that they possess an ability to think critically and creatively and take decisive action even when conditions are ambiguous and uncertain. These attributes will be especially important for senior leaders. Strategic art is the new discipline of the 21st century. For four decades, strategic art was linked to a Cold War paradigm. In the 1990s new strategic challenges

have arisen. Somalia, Rwanda, Haiti, Bosnia, and Kosovo have demanded fresh thinking and different strategic concepts.

The CJCS Review Panel Report recommended that war college graduates must possess sufficient technical ability and insight to anticipate and use ever increasing technological advances. Andrew Marshall, Director of Net Assessment, stated that we are inundated with technologies, all vying for attention and dollars. In addition, advances are occurring faster. The cycle time for new electronics is six months. The military advantage will go to the nation that can rapidly harness technologies. This is no easy task. Historically, it has been difficult to translate technology into battlefield successes.

Moreover, the CJCS Review Panel Report stated that graduates of war colleges must attain a strong sense of joint, interagency, nongovernmental, and multinational cooperation. This is more true today than ever. Military officers in Bosnia and Kosovo find themselves interfacing with a range of groups, including warring factions. They are part warrior, diplomat, humanitarian relief worker, and law enforcement officer.

A strong sense of jointness will be even more important tomorrow. The synchronization of joint combat power is occurring at lower levels—brigades, ships, and squadrons. War college graduates must be able deal with the world as it is—a tall order given the rapid change of today. Moreover, future military operations will increasingly include the integration of interagency and multinational participants.

The Evolution of JPME

In 1989 the Panel on Military Education of the House of Representatives which was chaired by Congressman Ike Skelton criticized the services for pursuing incompatible educational agendas. The Deputy Director, Joint Staff, for Military Education (J-7) oversees JPME. He is responsible for promulgating "Officer Professional Military Education Policy" that is issued by the Chairman to establish joint curricula and academic standards. In addition, the service colleges and the National Defense University (NDU) must undergo accreditation every five years.

However, the accelerating rate of change implies a transformation of JPME. While we can take pride in our current system—it has served us well—we must renew it, shake off the vestiges of the industrial age, and guide the system purposefully into the information and knowledge age.

This transformation has led to a new vision, "Joint Professional Military Education 2010." It is part of *Joint Vision 2010* and the focus of a study

group that is midway through a two-year evaluation of JPME. The initial recommendations are bold, imaginative, and visionary. The PME community is encouraged to give the recommendations serious and thoughtful consideration. They exploit technology to benefit teaching, learning, research, and outreach—and offer new and exciting ways to leverage the excellence of faculty, staff, and students (see summary below).

Joint Professional Military Education (JPME) 2010

Phase 2 Course of Action Development Report [FINAL DRAFT]

Summary of Conclusions (Chapter V):

- make JPME a career-long continuum
- establish both a Joint Center of Excellence (JCOE) at the Armed Forces Staff College to teach joint operational art and a joint intermediate staff school
- create a virtual learning environment via a network connecting both joint and service PME institutions
- export JCOE teaching on joint operational art to service PME institutions et al. as needed
- establish resident and nonresident education as well as a training program which is available to students anywhere on demand
- make specialized JCOE courses accessible to junior officers destined for joint assignments
- provide JPME phase I at service colleges for most mid-level officers destined for joint assignments
- provide JPME phase II through some of the means described above to some mid-level officers destined for joint assignments
- make JPME phase I and II available to both active and Reserve component officers through joint learning centers within unified commands
- improve expertise on JTFs by providing nonresident programs organized by U.S. Atlantic Command and the National Defense University.

Future JPME, for example, will demand a network-centric approach. As the President of the Naval War College, Admiral Arthur Cebrowski, pointed out, networks can readily empower organizations. This is seen already in the industrial sector. Electronic links between retail outlets and



Marshall Hall, National Defense University.

a network-centric approach could link every college in a joint virtual learning environment

distributors enable store chains to react to a rapidly changing market. At Ford Motors, virtual development teams use worldwide video-conferencing to collaborate on prototypes of a global car. The same can be accomplished in JPME. “Sharing knowledge occurs when people are genuinely interested in helping one another develop new capacities for action,” according to Peter Senge.

A Web-based network-centric approach could link every college in a joint virtual learning environment. Initially, this would be an electronic confederation of colleges that, while remaining unique centers of excellence and retaining their autonomy, would become increasingly interdependent.

Such an experiment could create greater interoperability, compatibility, and synergy within the JPME system. For example, it would enable greater collaboration on joint doctrine and future warfighting concepts. It would allow speakers, lectures, courses, curricula, games, and simulations to be shared with all colleges, as desired. Air warfare courses taught at the Air University, the center of excellence for airpower, for example, could be shared with other colleges. Alternatively, land and seapower courses at the U.S. Army War College and Naval War College, centers of excellence for landpower and seapower, could be part

of the curricula at other colleges. Electives could be offered throughout the JPME system, not simply at one college or university. Common efforts could also mean greater efficiencies and perhaps even cost savings.

New Horizons

Just as technological advances contribute to a revolution in military affairs, they also contribute to a revolution in military education. The network-centric approach and other technologies can be applied to distance learning. This could extend JPME beyond the brick-and-mortar schoolhouse to the field and fleet. Distance learning can provide continuous and career-long JPME. Industrial age education is conducted on a periodic basis and is perishable over time. But many professions are increasingly relying on information technologies to keep up with rapid changes in the world. Legal firms, for example, use the Internet and other information services to follow key court decisions. Distance learning could provide war college graduates with a means of updating their education and also offer them an on-demand, needs-based education.

Ultimately, distance learning would allow joint professional education to reach a broader population of officers. Dozens of higher educational institutions now offer quality courses and curricula through technology-based distance learning. Additionally, U.S. Special Operations Command uses interactive CD-ROMs to reach some 40,000 personnel around the world. But distance learning is not necessarily a substitute for seminars, which have proven to be an extraordinary learning environment. Rather, it would complement seminars. Qualified officers in joint environments like combatant command headquarters would be certified as adjunct faculty of a war college. Joint professional military education—including phase I and II of the Program for Joint Education (PJE)—could then be exported to these locations via distance learning.

Educational technology insertions into academic programs by competent faculty will create an information-age pedagogy that can deepen the learning experience. Ultimately, as digital video technology develops, virtual seminars will emerge and provide powerful learning environments as well. This will lead to an unprecedented convergence of resident and nonresident PME instruction, and military educators will be able to offer an increasing number of innovative educational delivery and access options to commanders and officers in the field and fleet.

Providing more Reserve officers with greater access to JPME will enhance their integration with the active components. Almost one out of four soldiers supporting Operation Joint Guard in

Normandy Hall, Armed Forces Staff College.



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Bosnia, Croatia, Hungary, and Germany belong to the Army National Guard and Army Reserve. In addition, some 600 Reserve component officers currently serve at U.S. Atlantic Command. In the event of a contingency their numbers would increase in combatant command headquarters. Yet there is no systematic method for these Reservists to obtain JPME beyond a limited number of opportunities made available at intermediate and senior level colleges. The same is true for civilian defense officials and others who participate in national security affairs.

Distance learning offers the possibility of greater integration with international institutions. This may be key to the future of allied and coalition interoperability. The ongoing RMA could lead to a gap in allied capabilities, particularly within NATO, making military operations more difficult. A JPME system connected to allied institutions could narrow this gap.

Technology can also help JPME become more fused with military operations. The role of ACOM in joint training and experimentation demands a close partnership with NDU. Although the Joint Training, Analysis, and Simulation Center can facilitate training, NDU can assist ACOM in the area of education. Moreover, PME institutions conduct some of the most sophisticated games and simulations in the world. The joint simulation system can connect institutions with operating forces. Simulations have provided valuable training and mission-rehearsal support for operations in Southwest Asia, Somalia, Haiti, Bosnia, and Kosovo.

There is a revolution in military education. It will transform the who, what, when, where, and how of PME. But this revolution will only be perceptible in retrospect. Those who witnessed the mobilization of the Armed Forces in 1941 were only able to perceive their ultimate warfighting potential by the gift of hindsight. The same will be true of our operational forces and PME system looking back 20 years hence. Change should never be precipitous, but rather purposeful, directed, and thoughtful. This is the time to initiate change in professional military education. The JPME 2010 study provides a solid basis for getting change underway.

Thomas Jefferson remarked that “as new discoveries are made, new truths discovered . . . institutions must advance to keep pace with the times.” This holds true for PME today. It must undergo a significant transformation to satisfy the demands of a rapidly changing world. However, such change will involve hard work. It will require a willingness to inquire and create, embrace change and vision, champion new ideas, and above all lead. Only then will we be able to create a successful joint professional education system for 2010 and the 21st century.

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