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From Sputnik to Minerva: Education and American National Security

by Sean Kay

Overview

This paper examines how external challenges have prompted national investments in education to enhance American national security. Rather than focusing primarily on traditional professional military education, this analysis examines how education has been used as a tool of American power. Four major moments of transformation in the international system are surveyed to illustrate a link between *strategic educational capacity,* defined as the application of attained knowledge and skills, and national power. The study then assesses how education is used as a power asset in the contemporary security environment. Today, an important educational capacity is emerging in the new Minerva program in the Department of Defense and other transformational educational concepts with security applications. Education is gaining an increasing interest among American decisionmakers as a strategic component of American power and an essential asset for successful military operations in the new global security environment.

Systems Transformation

The United States has experienced four unique periods of systemic transformation of the external security environment that focused attention on the need to enhance educational components of national power. The first of these periods involved internal investment to provide educational opportunities for returning Soldiers after World War II. This period was driven by concern to ensure that veterans would not go unemployed and, cause economic and social instability, but it also produced long-term strategic benefits. The second period was in response to a major international threat—the Soviet attainment of strategic missile capabilities as evidenced by the launch of Sputnik. Sputnik produced a national response that emphasized educational capacity in science, technology, and languages. The benefits of these two periods of investment in education were clear to a new generation of strategic thinkers at the end of the Cold War, who recognized systemic change and produced a third initiative that demonstrated high ambition, but also reflected declining American capacity at the end of the Cold War. A fourth period was brought on by the risk of terrorism and other emerging security challenges that now confront the United States. Combined, these cases show a clear relationship between major change in the international system and a role for education as an element of national response, with varying degrees of sustained investment.

The "G.I. Bill" and Shifting Power Assets

The United States accepted the relationship between education and national security following World War II with the approval by Congress of the Servicemen's Readjustment Act, also known as the G.I. Bill. This legislation provided for educational benefits for decommissioned Servicemembers. The immediate intent was to ensure social and economic stability by providing education and training (along with a living stipend), loan guarantees for homes, farms, and businesses, and unemployment pay for returning Servicemembers. Decisionmakers recalled that unemployed World War I veterans had become a substantial source of political protest and potential instability. Having hundreds of thousands of decommissioned troops return home after World War II made it important that society find a mechanism to ensure their eventual employment, and education investments became the primary tool. By 1947, veterans made up 49 percent of college admissions. By 1956, some 7.8 million out of 16 million World War II veterans had participated in education and training programs. A sizeable percentage of the American population benefited from attaining useful skills.[1] Before World War II, a total of 160,000 people in the United States had earned a college degree. By 1950, this number had risen to nearly 500,000. By the time World War II veterans ended their

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eligibility, the United States had gained 450,000 engineers, 240,000 accountants, 238,000 teachers, 91,000 scientists, and 67,000 doctors.[2] The total investment in the post–World War II target population was $14.5 billion. An additional investment was made following the Korean War, for which nearly 2.4 million veterans out of 5.5 million were eligible. Following the Vietnam War, an additional 8.2 million veterans and Servicemembers received training through 1989.[3]

The Cold War

By the late 1950s, Americans feared that the Nation was falling behind the Soviet Union in technological capacity. Of particular importance was the October 1957 Soviet launch of the Sputnik satellite into orbit around the Earth. This achievement suggested that the Soviet Union had made an enormous technological leap that threatened American national security. In 1958, Congress passed the National Defense Education Act (NDEA). Congress stated that it:

> finds and declares that the security of the Nation requires the fullest development of the mental resources and technical skills of its young men and women. . . . The defense of this Nation depends upon the mastery of modern techniques developed from complex scientific principles. . . . It depends as well upon the discovery and development of new principles, new techniques, and new knowledge.[4]

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The legislation targeted Federal support to expand access to education in the sciences, mathematics, and foreign languages, and created incentives for advanced graduate study and careers oriented toward teaching. Many students took advantage of Federal loans for higher education, which rose in number from 24,831 in 1959 to 247,000 in 1964. Nearly $443 million was allocated to Federal loans. The NDEA emphasized nontraditional language education programs via the development of National Resource Centers, Foreign Language and Area Studies Fellowships, and international research and studies programs. The National Resource Centers accounted for 45 percent of all doctorates in target languages by the mid-1990s, 59 percent of all graduate enrollments in the study of less common languages, and 81 percent of the least common languages studied in the United States.[5] Also, in 1961, the International Military Education and Training (IMET) program was established as part of American efforts to provide low-cost security assistance to allies. This program provided for U.S. training on a grant basis to students from abroad to enhance civil-military relationships and provide professional military education and technical training. Since IMET's inception, formal instruction has included over 2,000 courses at approximately 150 military schools and installations. Mobile education teams also have taught courses in host countries.[6]

Post–Cold War Agenda

By the 1980s, much of the post-Sputnik momentum had run its course. The end of the Cold War turned attention toward a peace dividend that would address domestic needs. Nevertheless, new security challenges drew attention from congressional leaders, who sought to renew educational security programs via the National Security Education Act of 1991. This legislation required the Secretary of Defense to fund scholarships for undergraduate students to study abroad in subjects critical to American national security; fellowships for graduate students to undertake similar study; and grants to U.S. institutions of higher learning to develop programs of study in and about countries, languages, and international fields essential to national security and underrepresented in U.S. academic programs. The National Security Education Program (NSEP) was initiated by Senator David Boren (D–OK), who noted that, as chair of the Senate Intelligence Committee, he had conducted a hearing involving the pioneers of the American Intelligence Community. According to Boren, "They said the most important thing you can have is a group of highly intelligent people who are extremely well-educated, who understand the cultures and speak the languages, who can go into (other) countries and be advocates for the United States. . . . It's human talent that is the key to our national security."[7]

Students taking advantage of NSEP scholarships were expected on completion of their studies to perform extensive government service or work as educators in their areas of expertise.[8] By 2008, over 1,000 award recipients had assumed full-time positions in the Federal Government, including 264 in the Department of Defense, 244 in the State Department, 108 in the U.S. Agency for International Development, 29 in the Peace Corps, 23 in the Department of Energy, 23 in the Department of Homeland Security, 20 at the National Aeronautics and Space Administration, and 15 at the Central Intelligence Agency (CIA).[9]

Emerging Threats

Despite efforts in the 1990s to refocus American educational priorities toward the post–Cold War security environment, the national investment was small. In early 2001, a key study warned that the United States was dramatically unprepared for the emerging threats of the 21st century. Known as the "Hart-Rudman" commission after

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its cochairs, former Senators Gary Hart (D–CO) and Warren Rudman (R–NH), this study noted that the entire institutional basis of American national security was "in decline and must be rebuilt," or the United States "risks losing its global influence and critical leadership role."[10] The Hart-Rudman commission identified catastrophic terrorism in the United States as an urgent threat just months before the al Qaeda attacks on New York City and Washington, DC (and called for the creation of a homeland security agency). The Hart-Rudman findings concluded that it was essential to recapitalize America's strengths in science and education. The commission declared that:

> The key factor driving change in America's national security environment over the next 25 years will be the acceleration of scientific discovery and its technological applications, and the uneven human social and psychological capacity to harness them. . . . Synergistic developments in information technology, materials science, biotechnology, and nanotechnology will almost certainly transform human tools more dramatically and rapidly than at any time in human history.

Asserting that education had to be returned to prominence in American national security priorities, the Hart-Rudman commission noted that "second only to a weapon of mass destruction detonating in an American city, we can think of nothing more dangerous than a failure to manage properly science, technology, and education for the common good over the next quarter century." These recommendations provided a foundation on which to recapitalize America's strategic investment in education and security for the new era of security challenges that the United States now confronts.

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Contemporary American Power Assets

The Hart-Rudman study made clear that the United States faced a growing gap in priorities relative to education and American power. The commission sought to close this gap by calling for a doubling of the U.S. Government's investment in science and technology research and development by 2010. This would require a Government-wide research and development budget of about $160 billion. The commission also called for a recapitalization of educational capacity via the recruitment of "more than 240,000 new and qualified science and mathematics teachers in our K–12 classrooms over the next decade (out of a total need for an estimated 2.2 million teachers)." The commission called on Government to enhance its recruitment of educated talent into the national security professional career track by expanding the National Security Education Act to include support for social sciences, humanities, and foreign languages in exchange for military and civilian service to the Nation. The commission warned that "educational competence in areas crucial to a quality Foreign Service—including history, geography, economics, humanities, and foreign languages—is declining, resulting in a shrinking pool of those with the requisite knowledge and skills for this service." The Hart-Rudman study clearly identified the need for a renewal of American educational capacity for a new period of security challenges.

Post-9/11 Education Security Gap

Public discourse following the September 2001 terrorist attacks initially implied that this new challenge would inspire a Federal response in realigning educational security infrastructure, as had Sputnik. By 2003, however, evidence indicated that the level of educational investment was disappointing. For example, the United States had enormous deficits in critical language expertise, especially in Arabic, Farsi, and Pashto. In 2003, the Department of Education noted that, of the 1.8 million graduates of American colleges and universities, a total of 22 students had completed degrees in Arabic.[11] In 2001 and 2002, two U.S. Senators submitted legislation under the rubric of a Homeland Security Education Act, but neither received support necessary to pass the bills. In late 2003, Congressman Rush Holt (D–NJ) submitted draft legislation for a National Security Language Act, noting that 99 percent of American high school, college, and university programs concentrated on only a dozen (mostly European) languages. He observed that "more college students currently studied Ancient Greek (20,858) than Arabic (10,596), Korean (5,211), Persian (1,117), and Pashto (14) put together."[12] This legislation would have authorized $75 million in Federal language support from primary through graduate study, and would have cultivated language and cultural expertise from immigrant communities for government consultation. The Holt bill, like those in the Senate, did not gain sufficient support to pass.

Language incapacity had nonetheless been recognized as a serious national security problem, as the Intelligence Community estimated it was at 30 percent readiness in critical languages.[13] Several years after the 9/11 attacks, the United States still had thousands of intercepted documents from possible terrorist sources waiting to be translated. The CIA, however, had turned away many qualified Arab linguists who were American citizens but had relatives overseas, thus making full background checks difficult.[14] The Department of Defense was forced under existing U.S. law to fire homosexual linguists and translators. Yet by 2006, of 1,000 U.S. employees at the American Embassy in Iraq, only 10 spoke fluent Arabic. This was an improvement over only 6 in 2005.[15] Recapitalization was necessary even in languages that had been emphasized during the Cold War. By 2008, Russian, a priority Cold War language, had nearly disappeared as a priority for

study—a gap that became apparent when Russia invaded Georgia in summer 2008.

The private sector has not emerged as an alternative to national investment in critical language study. Among the top 100 liberal arts colleges ranked by *U.S. News and World Report,* there has been a modest shift toward the study of Chinese and virtually none toward Arabic; 32.4 percent of these institutions offer 4 or more years of Chinese study, and 28.9 percent offer at least 2 years. Arabic is offered for 4 or more years at 3.4 percent of these same institutions (a total of four schools, and two out of the four are military academies). At least 2 years of Arabic (but less than 4) are offered at 18.4 percent, and 19.2 percent offer some Arabic, but less than 2 years of study. To learn either of these critical languages, a full 4-year program of study is needed. Despite improvements, the Nation's most capable and well-endowed institutions of higher learning remain largely Eurocentric.[16]

Advantages in Educational Infrastructure

The United States has the best universities in the world, is a global leader in science and technology, and has important niche examples of impressive adaptation to the evolving security agenda. According to the National Academies of Sciences, in 2004 China gained some 600,000 new engineers, India 350,000, and the United States only 70,000. But, as Fareed Zakaria has observed, if 2- and 3-year programs of basic training are discounted, the Chinese engineering degrees would decline to about 200,000 per year, and Indian engineering degrees to about 125,000 a year. And per capita, the United States trained more engineers than either China or India. In the area of computer sciences, the United States graduates about 1,000 PhDs a year, versus the 35 to 50 that graduate from Indian universities annually.[17]

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The United States does have vulnerabilities, as the overall percentage of American jobs requiring a PhD in science and technology that were filled by foreign workers rose from 24 percent to 38 percent between 1990 and 2000.[18] Furthermore, it is increasingly difficult for both government and academia to employ highly educated expertise in such critical areas as information technology, science, and engineering because of the higher pay available in the private sector. Nevertheless, while other countries make substantial gains in K–12 education for the foreseeable future, the United States will retain substantial comparative advantages in general educational assets. Consequently, current investments are focusing mainly on more immediate means of applying educational advantages to meet the needs of the new security environment.

Creative programs have emerged in American military training to target strategic language skills. A long-standing center of defense language training, the Defense Language Institute Foreign Language Center, has been transformed to focus language training on an array of new requirements, including arms control verification, drug control, and support for military operations in the Persian Gulf, via a curriculum that emphasizes total language immersion. The U.S. Army has implemented a program of employing heritage speakers of critical languages to work as translators and interpreters; by 2006, the Army had hired 479 people, of whom 133 were deployed in operations.[19] These programs were part of a 2005 Defense Language Transformation Initiative that emphasized the need for adaptation of strategic language studies.[20] More broadly, NSEP has launched a National Flagship Language Initiative, which is the first major partnership between the Federal Government and higher education to facilitate the study of advanced language competency in critical strategic languages focusing on Arabic, Chinese, Hindi, Japanese, Korean, Persian, Russian, and Turkish. NSEP indicates its only constraints are "current funding limitations," but that it has targeted partnerships in Arabic at the University of Maryland and the University of Damascus; in Chinese at Brigham Young University and Ohio State University in the United States and Nanjing University in China; in Korean at the University of Hawaii at Manoa; in Persian (Farsi) at the University of Maryland and at Tajik State National University in Tajikistan; and in Russian at St. Petersburg University. Nonetheless, by 2008, a total of only 100 people had completed this training.[21]

Another important program is the transformation of the Defense Medical Readiness Training Institute (DMRTI) in San Antonio, Texas. DMRTI has developed a Combat Casualty Care course for primary and secondary battlefield medical training under simulated combat conditions. The institute also provides training for medical management personnel and an executive course for senior medical officers engaged in homeland security operations to include chemical, biological, radiological, nuclear, and natural disaster relief training. Finally, surgeons and physicians receive training for treating battlefield trauma in combat situations. Because of limitations in available battlefield personnel, such investments—especially in basic training education—can substantially increase survival rates in combat. These concepts have also been adopted into an extended Army basic training process, which now includes battlefield lifesaver training.

An important private-sector contribution is the Monterey Institute for International Studies program in Nonproliferation Studies, which offers a master's degree. The program has a staff of over 40 and employs over 50 graduate student researchers, with a global student population. This program is the only such single-issue, nonproliferation program in the United States. Other universities employ social science, math, science and technology, and policy studies to educate on elements of nonproliferation (particularly the Center for International Security and Cooperation at Stanford University and the nonproliferation curriculum at the University of Washington). However, most of these programs include nonproliferation within a broader security studies curriculum. Nationally, at the undergraduate level, often only portions of a course on international relations are devoted to nonproliferation.[22] Even less attention is paid to the high school level, though

the Monterey center conducts a high school outreach project to provide curricula and instructional materials on nonproliferation issues to secondary schools and train teachers in the use of these materials.[23] Nonetheless, as William Potter (founding director of the Monterey nonproliferation program) concludes, "A tremendous gap exists between government statements about the dangers of weapons of mass destruction and the paucity of national funds allocated to train the next generation of specialists on disarmament and nonproliferation."[24]

Such programs reflect an awareness of the need to apply transformation strategies to education and training programs to meet new threats. Nevertheless, overall budget priorities demonstrate a fundamental difference in response to the new security agenda between Sputnik and September 11, 2001. The contemporary equivalent of money spent on the implementation of the National Defense Education Act of 1958 was $7 billion. In 2004, expenditures on equivalent programs in the Department of Defense, National Science Foundation, and the Department of Homeland Security totaled $70 million. In 2007, this was cut to $51 million.[25] Much is said about the need to enhance American educational capacity; however, the process has been reactive and significantly underfunded. In January 2006, President George W. Bush announced a plan to spend $114 million for a National Security Language Initiative, 4 years after it had been suggested in Congress. President Bush indicated that the Defense Department would allocate more than $750 million between 2007 and 2011 for critical languages training. This announcement was made at a 2-day Washington summit of more than 100 college presidents. According to President Bush, "This program is part of a strategic goal, and that is to protect this country in the short term and protect it in the long term by spreading freedom. . . . We're facing an ideological struggle, and we're going to win."[26] The anticipated Defense Department expenditure would be allocated to military academies and for Reserve Officers' Training Corps students, and also through a Civilian Language Reserve Corps, with a goal of eventually having 1,000 people available for deployment. Through the State Department, additional Fulbright Scholarships would be added for overseas language study. Through the Gilman International Scholarship Program, an additional 200 scholarships for low-income undergraduates would be added.[27] Nevertheless, as David Ward, president of the American Council on Education said, "If we're going to do anything in higher education in the next 20 years, we'll have to tap more than one source of revenue. . . . We can't just expect the government to fund it all. We're not in the age of Sputnik anymore."[28]

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Education and Military Operations

As external security threats have changed, so have the requirements for full-spectrum military operations. Many Soldiers who have experienced modern warfare in Iraq and Afghanistan argue that it is essential to reorient operational capacity to incorporate language and cultural skills and otherwise adapt strategy and tactics for unconventional warfare.[29] Analytical abilities, cultural awareness, language skills, and the capacity to conduct joint operations and include diplomatic, economic, and political tools of power are all relevant from the general officer to the lowest rank in the field. All of these skills require substantial training for recruits, and, at the senior level, a depth of knowledge to establish effective military doctrine, planning, and budgeting.

Stability Operations

Sometimes small but symbolic investments can be crucial to winning hearts and minds and dissuading people from supporting insurgents. For example, early in its intervention in Bosnia-Herzegovina after 1995, the North Atlantic Treaty Organization (NATO) used its transport capacity to send 87 school children on an educational field trip from Tuzla to Zagreb and arranged for local schools to receive computers as donations from private voluntary organizations. Attaining peaceful reconciliation in postconflict situations, however, can require major transformation of and investment in higher education. In Sudan, for example, the national education program has been dominated by Islamic identity and has neglected Christian study—reflecting a divide between the dominant Arab government and Christian minorities in southern Sudan. Most Sudanese textbooks that reference a religion stress Islam. There are frequent references to violence and warfare and promotion of military skills as an essential component of citizenry.[30] In a sixth-grade Arabic-language book, students are told that: "You know what excellent rewards Allah prepares for Muslims for fighting Kufar [non-Muslims]."[31] Any lasting peace between warring parties in Sudan will have to include a major rewriting of textbooks in the event that a lasting peace agreement is reached and political reconciliation begins. Beyond weaknesses in educational architecture, the physical and psychological effect of war on generations of children can be difficult to reconcile. There are as many as 300,000 children around the world serving either voluntarily or involuntarily in militaries or private militias. Children under the age of 18 fought in Sierra Leone, Liberia, Congo, Sudan, Sri Lanka, Afghanistan, and Burma in the 1980s and 1990s.[32] At the military operational level, in Europe, NATO and allied bilateral programs have been involved for nearly two decades in facilitating transformation of countries from Central and Eastern Europe in defense planning reform, military training, and military-civilian relationships with a proven record of consolidating democratic reform.

In the broader war on terror, education has become a center of gravity as terrorists use training camps for organization and the Internet for propaganda and communication, and many rely on extreme Islamic schools for recruitment. Even in societies that have governments allied with the United States, such as Saudi Arabia, official schoolbooks offer a range of ideological hatred of Christians, Jews, and

Muslims who do not follow Wahabi doctrine. This begins in first-grade textbooks and culminates in the 12th-grade text, which instructs students on religious obligations, including waging jihad against the infidel. Saudi schools' Islamic study comprises up to a third of students' weekly classroom hours in early ages and several hours a week in high school. Moreover, Saudi Arabia exports religious texts to Islamic schools around the world and directly runs academies in 19 international capitals.[33] Meanwhile, many non-Muslims are misinformed, some believing, incorrectly, that all Islamic schools are radical, and that all concepts of jihad are violent. The ability to coordinate effective information campaigns that will respect cultural traditions while at the same time reducing enemy recruitment is a critical element of successful engagement in peace support and counterinsurgency operations.

Contemporary military operations involving counterinsurgency require metrics by which to know whether hearts and minds are being "won" among local populations. Modern warfare thus places a high priority on cultural, anthropological, and language skills and the public opinion and demographic knowledge most often found in universities.[34] In 2007, the Department of Defense expanded by $40 million a program known as the Human Terrain System. This program, run by the U.S. Army Training and Doctrine Command, placed anthropologists and other social scientists with each of the 26 American combat brigades then serving in Iraq and Afghanistan. Human Terrain Teams include military personnel paired with social scientists, linguists, and area studies experts who receive weapons training and wear military uniforms in a noncombat support role. These teams operate in a command relationship similar to that of chaplains and do not actively collect intelligence or participate in lethal targeting. In support of such programs, innovative tactical perspectives are being integrated into military training. For example, at the U.S. Marine Corps Command and Staff College, midlevel officers now take a course in Culture and Interagency Operations—part of a 10-month curriculum that consists of 34 case studies and language instruction in Arabic, French, Chinese, or Korean.[35] The net effect is summarized by one participant in the Human Terrain System: "One anthropologist can be much more effective than a B–2 bomber—not at winning a war, but creating a peace one Afghan at a time."[36] Field commanders estimate that these new operational concepts decreased lethal combat operations—in some cases by as much as 70 percent—increased effectiveness in action planning and analysis, and improved situational awareness.[37] Troops praised this initiative as "brilliant" in helping them to better understand how the things they do are perceived within a foreign culture.[38] The hazards of untrained civilians working in dangerous war zones were, nonetheless, made clear in spring 2008, when a political science graduate student working with combat troops in Afghanistan was killed by a roadside bomb.

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In June 2008, the Defense Department formalized a new program named Minerva—after the Roman goddess of wisdom and warriors. This program reflected a new approach to education and security instigated by Secretary of Defense Robert Gates. For decades, some social scientists had resisted the idea of involving their expertise in military operations. Some scholars believed that it was inappropriate to allow military interests to guide social science research—especially in areas such as anthropology, which requires embedded fieldwork guided by trust attained with indigenous peoples. Historical experiences in Latin America and Vietnam fueled concerns among anthropologists. At the same time, however, academics have often criticized military operations for their lack of sensitivity to important local traditions and customs. Many in the military had a view of social scientists as critical of the military and not understanding operational requirements. Today, troops on the ground in Iraq and Afghanistan have made clear their high demand for cultural expertise to complement their tactical operations—and as key to mission success. The Minerva project was designed to award $50 million in grants over 5 years to involve evolutionary psychologists, demographers, sociologists, historians, and anthropologists in security research. Grants would prioritize translating original documents, including those captured in Iraq; studying changes in the Chinese army; explaining the resurgence of the Taliban; and creating computational models developed to explain why groups make what are seen in the West as "irrational" decisions.[39] The architects of the Minerva program envision its facilitating new academic consortiums in areas that are inadequately coordinated or funded. Furthermore, the program is being developed to include well-recognized peer-review standards and public transparency, rather than classification systems that protect secrecy. Minerva provides an important component of broader national education priorities that must include an increased role for social sciences within the National Science Foundation and incentivize a revitalization of area studies and strategic language priorities in American universities.

Warfighting: Iraq and Afghanistan

The role of education in military operations has been evident in Iraq and Afghanistan. Iraq was a country with a substantial educational infrastructure dating to the 1960s. Yet since the 2003 U.S.-led invasion of Iraq, hundreds of professors and scientists have been killed and thousands forced into exile, and others operate under intimidation and coercion by insurgents and tribal militias. In one 12-month period in 2006–2007, 78 professors were assassinated—with one estimate that 550 professors had been killed.[40] In some regions of Iraq, political pressure from Saddam Hussein's Ba'athist government was replaced after the invasion by overt pressure from Sunni and Shiite militants—making it difficult to hold class. On average, only 30 per-

cent of Iraqi students actually attend class.[41] The initial post-invasion investment in education was almost irrelevant. In 2003, the Iraqi Ministry of Education and Scientific Research estimated that its immediate need after the invasion was for an infusion of $1.2 billion. However, an international donors' conference in October 2003 offered no funds for education in Iraq. A year later, the U.S. Congress appropriated $87 billion for Iraq's reconstruction. The Coalition Provisional Authority requested $120 million for Iraqi higher education. Out of that $120 million request, Iraq actually received only $8 million. In 2004–2005, the entire national Iraqi spending on higher education was $225 million—65 percent of which was for wages.[42]

By 2008, the application of a new counterinsurgency strategy in Iraq under the command of General David Petraeus began to show tangible improvements in Iraqi army training—an essential condition of any gradual American disengagement. The United States has faced an ongoing dilemma in the training of Iraqi forces because of major sectarian divisions in Iraq, having to avoid training and equipping militias that would fight each other. Furthermore, acceleration of Army training has also exposed the Iraqi Security Forces to the danger of sacrificing quality over quantity to meet political timelines for achieving force-level metrics. By 2008, the general quality of trained Iraqi forces had improved considerably—and provided the United States with a cadre of indigenous force trainers with experience that could be fed back into joint training doctrine.[43]

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Education has become essential for counterinsurgency operations in Afghanistan. It has been critically important to counter the Taliban legacy of using schools to propagate radical Islam and barring women from education. Advances in education in Afghanistan are regularly cited by U.S. and NATO officials as evidence of successful nationbuilding since the Taliban reign. According to the Department of State, in 1993, 45,000 children went to school in Afghanistan, of whom only 19 percent were girls. By late 2007, there were 6 million children in Afghan schools, 40 percent of whom were girls—and the percentage of women teachers had almost doubled from 15 percent in 1993 to 29 percent in 2008.[44] Despite these improvements, the average salary for a teacher was about $40 a month. Education success stories have also become targets of threats and violence from insurgents throughout Afghanistan. In 2005–2006, for example, there were 17 assassinations of teachers and education officials and over 200 attacks on teachers, students, and schools. Threatening "night-letters" were often sent to teachers to intimidate them against cooperating with NATO forces. One illustrative letter warned: "Respected Afghans: Leave the culture and traditions of the Christians and Jews. Do not send your girls to school," or the Taliban would "conduct their robust military operations in broad daylight."[45] While overall numbers of students enrolled in Afghanistan have gone up since 2001, in some key areas of Taliban activity, such as Kandahar and Helmand Provinces, over 200 schools had to be shut down or were destroyed by insurgents.[46] The Taliban justify attacks on schools by arguing that, as one spokesman did in March 2006, the "government has given teachers in primary and middle schools the task to openly deliver political lectures against the resistance put up by those who seek independence. . . . The use of the curriculum as a mouthpiece of the state will provoke the people against it. . . . If schools are turned into centers of violence, the government is to blame for it."[47] Meanwhile, local religious schools in Afghanistan and Pakistan are used by the Taliban to recruit people into their cause. Afghan President Hamid Karzai warned in 2006 that many local Islamic schools were responsible for "exploiting poor, uneducated, desperate young children, motivating them into killing themselves, motivating them into attacking other people."[48]

Neither Iraq nor Afghanistan was in a position to stand as a sovereign nation without sustainable national army and police forces. Nonetheless, the capacity for training from scratch (and on an accelerated timeline) was not something that the United States or its allies were prepared for. A major program to "train the trainers" was also missing. By 2008, politically accelerated training timelines led to lower quality troops. In Afghanistan, the government had established a goal of a stand-alone army of 70,000 to be in place by 2011—trained and supported by the United States and its NATO allies. However, this training was done in difficult circumstances; 80 percent of the trainees were illiterate, and only 2 percent had knowledge of English. There was high desertion, poor retention, very poor equipment, complicated tribal and ethnic demographics, and other deeply ingrained cultural barriers. It was also unclear what this force was being trained for: tactical military operations against insurgents, or traditional army functions, such as border defense?

Even worse conditions existed with the Afghan police. The police training was complicated by an initial low awareness of its importance and a lack of training capacity in American and NATO forces. At the critical time in 2003 when an insurgency might have been avoided, the United States offered a total of $5 million for Afghan police training. Germany, which took the initial organizational lead, sent only 50 police trainers for the entire country. By 2007, some NATO officials were speaking of a need for a total of 5,000 police trainers, and perhaps scrapping the existing program. Such gaps are well understood by Soldiers conducting tactical military operations on the ground in conflict zones. It is from this bottom-up experience and demand that the strong basis for a significant investment in applied educational assets can be attained to advance security interests for the United States.

A New Esprit de Corps

In April 2008, Secretary Gates said that it was time to "return to the acceptance of eggheads and ideas" to meet national security threats. Gates asserted, "We are interested in furthering our knowledge of these issues and in soliciting diverse points of view regardless

of whether those views are critical of the department's efforts. . . . Too many mistakes have been made over the years because our government and military did not understand—or even seek to understand—the countries or cultures we were dealing with."[49] In stating the new educational challenge, Secretary Gates was building on the sentiments of President Dwight Eisenhower, who led the American response to the Sputnik crisis by telling the Nation that "what will be needed is not just engineers and scientists, but a people who will keep their heads and, in every field, leaders who can meet intricate human problems with wisdom and courage. In short, we will need not only Einsteins and Steinmetzes, but Washingtons and Emersons."[50] The highest-impact programs for education and security developed during the Cold War succeeded because they had the engagement and bipartisan support of Congress, a political dynamic that must be rebuilt. There is now a bottom-up understanding that at a tactical level, existing low-cost programs can be broadened to engage sustainable interagency and military-civilian elements. Enhancing the Minerva program and other innovations in applied educational capacity represents an excellent opportunity for the Defense Department, Congress, and the American education community to build partnerships for preventing (and when necessary managing) national security crises based on a new, expansive, and inclusive esprit de corps involving military and civilian capacity.

Notes

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