STRONG STUDENTS, STRONG FUTURES, STRONG NATION.

MAINTAINING A COMPETITIVE NATION BY INVESTING IN EDUCATION

A U.S. ARMY WHITE PAPER
PREPARED IN 2009

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STRONG STUDENTS, STRONG FUTURES, STRONG NATION.

Decisive action is required if the United States is to maintain its position as a leader, remain globally competitive and safeguard national security. Educators, business and community leaders, military leaders and other major stakeholders will need to act quickly and with conviction to address the current crisis in education.

More than $215M was spent on tuition assistance for both officer and enlisted Soldiers for FY08 which demonstrates the significant investment the U.S. Army has made in post-secondary education (2009, Army presentation). The U.S. Army has a long history of training young men and women, educating and developing leaders, and collaborating with community organizations to improve student outcomes, and is deeply committed to improving educational opportunities and the post-secondary accomplishments of our young people.

More than $215M was spent on tuition assistance for both officer and enlisted Soldiers for FY08 which demonstrates the significant investment the U.S. Army has made in post-secondary education (2009, Army presentation).

We have a strategic interest in increasing student academic achievement as the U.S. Army continues to seek highly-skilled knowledge workers to help fill leadership positions and carry out our important mission for decades to come. As with other leading industries and global enterprises, the U.S. Army shares a common interest in improving education for all. We realize the future of strategic military defense requires a range of knowledge-based skills, technological aptitude, technical training, adaptive thinking and problem-solving abilities, and high-level competencies among Soldiers, both officer and enlisted.

While known primarily as a provider of our nation's top security forces and defender of our national interests around the world, the U.S. Army is also one of the leading federal organizations that supports and invests in educational initiatives around the country. These investments are predicated on the deep-seated conviction that our national security is strengthened by an informed, well-educated and competent citizenry. We also see it as part of our shared responsibility to enable the brightest and best futures for our young people, whatever educational or career path they choose after high school.

This white paper articulates the essential role the U.S. Army plays in education, highlights some of our strategic successes and contributions, and invites leaders from all sectors to join in our commitment to promoting and supporting education for all. Educating our youth will provide the greatest return on investment in a "knowledge-based" economy. The U.S. Army stands ready to meet this challenge: to convene and collaborate with policy makers and education, business and community leaders and to enter alliances to ensure the strength and success of the young people who will shape the future of our great country. Indeed, this commitment is captured in our call for: "*Strong Students, Strong Futures, Strong Nation*."

Lieutenant General Benjamin C. Freakley
Commanding General
U.S. Army Accessions Command

I. EXECUTIVE SUMMARY

The U.S. Army's relationship to education

The U.S. Army has had a long-standing commitment to education. This manifests itself in four primary ways:

1. **EDUCATING SOLDIERS.** First and foremost is the Army's focus on training and educating Soldiers. In FY08, the Army invested more than $215 million in tuition assistance for both officer and enlisted Soldiers (2009, Army presentation). That year, nearly 4,000 Soldiers were awarded degrees ranging from associate to doctorate degrees, while serving their country.

2. **A CONTRIBUTING PRESENCE IN HIGH SCHOOLS AND COLLEGES.** Currently, the Army supports more than 1,600 JROTC units in high schools across the nation, serving more than 280,000 students. JROTC fosters academic accomplishment, personal responsibility, physical fitness, and citizenship and social responsibility. The Army has also long been associated with college access and affordability. In 2008, the Army endowed more than $283 million in college scholarship money to more than 16,600 ROTC cadets in return for their commitment to serve. ROTC is the Army's primary commissioning source for future officers.

3. **SUPPORT AND TOOLS FOR EDUCATORS.** Recognizing the constraints on the education system, the Army supports educators via the provision of more than 70 free-of-charge programs and resources for teachers, coaches, school administrators and community organizations for use in the classroom, school and enrichment activities. These resources include science and math enrichment, engineering competitions, internships, leadership development, and a computer-based test readiness program developed by a respected third-party. These programs are not used for recruiting purposes, and are developed and supported across a number of commands within the Army.

4. **STRATEGIC PARTNERSHIPS AND ALLIANCES.** The Army has forged a number of strategically important and innovative partnerships with education organizations as its interest in the quality of the nation's education system has taken on new urgency. As a major employer with a complex, global mission in an uncertain world, the Army is keenly aware of the requirements for competent officers and Soldiers in the future. Like many other employers, the Army requires entrants who are agile and ethical learners, adept in 21st century skills, competent in science and math, healthy and fit, and who bring rich perspectives about the world. Yet, currently, fewer than 3 in 10 young people between the ages of 17-24 are qualified to enter the Army due to academic, health or character issues. The Army has actively forged partnerships with like-minded organizations that share common concerns and a desire to act. These partnerships include relationships with the National Association of State Boards of Education (NASBE), the Association for Career and Technical Education (ACTE), PHASE 4 Learning Centers (P4LC), Project Lead the Way (PLTW), Great Minds in STEM (formerly Hispanic Engineer Achievement Awards Corporation (HENAAC)), and a network of businesses that form the Army Reserve's Employer Partnership Office (EPO) and the Army's Partnership for Youth Success (PaYs) program.

The U.S. Army's commitment to education:

- **Educating and training Soldiers**
- **Educating students at the high school and college levels**
- **Innovative no cost resources for front-line teachers, coaches and community youth organizations**
- **Forging action-oriented partnerships with leading education, community and business organizations**

Education is a critical pathway to individual and collective success

In the coming decade, the United States will face a significant workforce shortfall and both the civilian and military sectors may not have the skilled labor required to meet the demands of a knowledge-based economy. The effect on our ability to compete globally will be devastating if we do not act immediately and forcefully to reverse the impact. The U.S. Army agrees with the opinions of lawmakers, educators, and business and community leaders that in order to address this shortage, we will need to invest heavily and wisely in K-16 education for all our youth. Leaving behind our most vulnerable populations as we move forward will be to our national detriment if the potential talents and skills of all students are not fostered and supported. Enabling all of our citizens to achieve both the highest levels of educational attainment and economic prosperity will help to ensure a more successful and secure future for the nation.

While the current state of our education system is sobering, there is abundant opportunity to improve student outcomes, increase the chances for all our young people to grow into healthy and productive citizens and help them achieve post-secondary success in life and work. The U.S. Army is and wants to remain an essential part of the equation. A U.S. Army Accessions Command presentation in 2009 stated: [The] U.S. Army is an institution rich with human and programmatic resources available for educators and communities. It has valuable knowledge and insights to offer; an inventory of existing programs to offer communities, educators and students; and a willingness to collaborate and lend expertise.

Scholars, educators and business leaders recognize that the U.S. Army has made and will continue to make significant contributions to the long-term security and prosperity of our nation through its many educational programs and partnerships.

"[We] must provide a high-quality education that fosters creativity, innovation, and analytical rigor necessary to keep America at the frontier of development of new knowledge and the creation of entirely new industries that will drive economic growth."

Hamiliton Project, Brookings Institution (Bendor, J. et al., 2007)

The purpose of this white paper is to present the Army's commitment to education and its essential position in the educational and secondary success of the nation's youth. It will:

1. Provide the national and international context of the current state of secondary education;
2. Highlight the important role the Army plays in supporting and implementing secondary-level educational programs;
3. Illustrate some of the Army's most successful national education programs; and
4. Present opportunities for collaboration to effect change in improving the educational outcomes and opportunities for our nation's youth and ultimately, in enhancing the well-being and security of our country.

The Army has deep experience, broad geographic reach and demonstrated success among at-risk populations. It understands that our greatest strength comes from ensuring that all in the nation are empowered and prepared to be productive and healthy contributors to society. The U.S. Army shares in the common cause that developing our county's youth to be successful in work and in life will lead to a stronger nation.

II. INTRODUCTION

Effective education is a matter of economic competitiveness and national security

The U.S. Army is a major employer. It has a strategic interest in improving student academic achievement as it seeks highly-skilled knowledge workers and capable decision makers to help fill its leadership positions and carry out its important mission for decades to come. While known primarily as a provider of our nation's top security forces and defender of our national interests around the world, the Army is also one of the leading federal organizations that supports and invests in educational initiatives around the country. Its investments are predicated on the deep-seated conviction that our national security is strengthened by our ability to educate, develop and support an informed, technology-adept and competent citizenry.

> *"The U.S. military is one promising place to look for insights and ideas [on education]. After all, it enjoys a well-deserved reputation for reaching, teaching and training young people who are rudderless, and for setting the pace among American institutions in advancing minorities. What's more, for many years various branches of the military have either run or collaborated with public schools in operating alternative schools, schools within schools, extracurricular programs and youth corps for dropouts."*
>
> Hugh Price, Visiting Professor, Woodrow Wilson School, Princeton University (Price, H., 2008)

An educated population:

- Increases economic security and global competitiveness
- Enhances global understanding
- Contributes the financial capital to make the necessary investments in national security

FIRST, education serves to strengthen national security by improving our global competitiveness and contributing to our economic security. The strength of the nation and the well-being of citizens depend heavily on providing high quality education to all our youth. Andreas Schleicher, Head of the Indicators and Analysis Division in the Directorate for Education at the Organization for Economic Cooperation and Development (OECD) reports that *"Individuals and countries that invest heavily in education, benefit economically and socially from that choice ... Skills are now a major factor driving economic growth and broader social outcomes, both in the world's most advanced economies and in those experiencing rapid development."* Without these necessary investments, we risk losing our competitive advantage and reducing the quality of life for all who live in the United States.

> *"[The] lack of quality education for all children jeopardizes the fundamental American belief that every citizen has the opportunity for success, no matter their background or place of origin ... if we can't keep that true for every American, we're going to lose who we are, and then we won't lead - and so it is, for me, the most pressing national security issue."*
>
> Former Secretary of State, Condoleezza Rice (Gorman, S., Reuters News, Oct. 2008)

SECOND, education helps create opportunities for enriching global understanding among citizens around the world that, over the long term, can help foster strategic alliances and greater understanding in times of conflict. Dr. James E. Harf, Professor of Political Science at Ohio State University, writes that national security as understood in a broader view is the "*promotion of national values, interests and institutions*" and it is within the education system that these ideas can be fostered and "*competent citizenship*" can be learned.

THIRD, the connection between education, economic security and national security is clear. In a 2007 report on higher education and national security, former Senator Bob Kerry (D-NE) outlined the direct link between a strong economy built on a robust education system and the percentage of GDP that is available to spend on defense. "*Today, we spend 4 percent of our GDP on defense ... there is a direct cause-and-effect relationship between the strength of higher education and our capacity to afford relatively high levels of defense spending.*" Investments in education increase gross national income and provide a larger economic base to support financial requirements for defense and security.

Providing support to educators and students

The U.S. Army has supported front-line educators and students through a variety of programs, resources and strategic partnerships including: JROTC, Challe*NG*e, March 2 Success, Planning for Life, Project Lead the Way, distance learning programs and many others. The intent of such investments is to foster motivation to stay in school, improve test scores, drive STEM proficiency, and provide enrichment opportunities for students. Among Soldiers, the Army's focus is on providing expanded college access and affordability, skills training and development, and post-secondary career opportunities. Consider these examples:

Support for Secondary Students

- The U.S. Army's JROTC programs increase graduation rates and SAT test scores.
- High school dropouts improve their reading and mathematics competencies through the U.S. Army National Guard's Youth Challe*NG*e Program.
- The U.S. Army's March 2 Success online, tutorial test preparation program increases standardized test scores. The Web-based program is available at no cost to students, schools and community youth organizations.

Post-Secondary Education and Career Development for Soldiers

- The U.S. Army provides millions of dollars in college tuition assistance every year to current Soldiers to support their post-secondary education aspirations. Over a billion dollars every year is provided for Soldiers who use Army educational benefits through the VA after ending their service tours.
- The U.S. Army's F. Edward Hébert Armed Forces Health Professions Scholarship Program (HPSP) has provided full tuition and monthly stipends for nearly 15,000 qualifying students interested in pursuing medical careers.
- The U. S. Army provides career training and skills development in more than 150 career and technical specialties, including Combat Medics, Communications Specialists, Mechanics, and Human Resources Specialists.
- The U.S. Army looks beyond school to provide pathways to good jobs with solid career development by partnering with hundreds of businesses.

"Education is one of the most significant predictors of life outcomes for adults, and the single biggest predictor for their children."

Hilary Pennington, Director, Special Initiatives,
The Bill and Melinda Gates Foundation, 2008

Forging partnerships

It's clear, however, that no single sector can address the challenges as effectively as thoughtful, collaborative partnerships. Military, business, community and education leaders must come together in coordinated partnership to address the challenges ahead. The U.S. Army has considerable experience in bringing together organizations and integrating efforts of leaders across the education, business, policy maker and local communities. It has entered relationships with such organizations as: the National Association of State Boards of Education (NASBE), the Association for Career and Technical Education (ACTE), PHASE 4 Learning Centers (P4LC), Project Lead the Way (PLTW), Great Minds in STEM (formerly HENAAC), and a network of businesses that form the Army Reserve's Employer Partnership Office (EPO) and the Army's Partnership for Youth Success (PaYs) program. Such partnerships highlight the promise of what can be done when leaders come together with passion and conviction to work on achieving a common goal.

Declining outcomes, economic costs, compromised futures

While the United States is a world leader in many arenas, it has witnessed a gradual decline in educational attainment and achievements among its secondary student populations. The individual impact of this decline affects a person's ability to advance professionally and economically throughout his/her lifetime.

According to a 2008 America's Promise Alliance report, a non-partisan coalition of more than 200 diverse organizations, an estimated 1.2 million students drop out of school every year and approximately 30 percent of all students fail to graduate. Of those who graduate, only half of those are prepared for college or work (Cities in Crisis Report: 2008, America's Promise Alliance).

Moreover, the American Diploma Project Network published its 2008 findings that indicated that 40-45 percent of recent high school graduates report significant gaps in their skills both in college and in the workplace, and 30 percent of first-year students require remedial courses. In a 2005 study published by Achieve, Inc., a bi-partisan, non-profit organization created by the nation's governors and business leaders to address academic standards and achievement, over half (56 percent) of all college students said that high school did *not* prepare them for the work and study habits expected in college.

> *"Valuable education partnerships are constructed through and maintained by high-functioning collaborative relationships and structures that build capacity to engage and innovate ... Meaningful partnerships ultimately require forging new relationships, building a multiplicity of connections and developing new capacities to collaborate, all tied to a vision of successful outcomes for children and youth."*
>
> Dr. Hal F. Smith, Vice President, Education and Youth Development, National Urban League (*The State of Black America*, 2009)

In the new "knowledge economy," experts forecast that two-thirds of all new jobs will require a post-secondary education, apprenticeships, or recognized certifications. By 2025, at least 60 percent of our population will require a post-secondary education in order for the country to remain globally competitive (OECD, 2005).

Currently, only 29 percent of the U.S. population above age 25 has a post-secondary degree (U.S. Census Bureau, 2008). This is only a 5 percent increase since 1998. Among the Hispanic and African American populations over age 25, only 13 and 20 percent (respectively) have a post-secondary degree. These statistics speak of the enormous need to increase our educational attainment among all student populations and particularly among Hispanic and African American youth.

According to the National Dropout Prevention Center at Clemson University, it is estimated that the cost of dropouts is $320 billion in lost lifetime earning potential each year and that, individually, dropouts earn significantly less over a lifetime of full-time employment than high school graduates (Fields, G., *Wall Street Journal*, 2008). The U.S. Census Bureau (2008) reports that on average, high school graduates earn $31K per annum while college graduates earn on average $57K per annum.

A 2008 study published by America's Promise Alliance reports that the relationship between unemployment and educational attainment is closely linked (Cities in Crisis Report: 2008, America's Promise Alliance). Those with less education are more likely to be unemployed. Compared to other industrialized nations such as Finland and Korea, if the United States had closed its educational achievement gap in recent years, our 2008 GDP would have been $1.3 to $2.3 trillion higher; or in other words, the persistence of these educational achievement gaps would be the economic equivalent of a permanent national recession (McKinsey, 2009).

Aside from loss in direct earning potential, the cost to the nation is also related to differences in the rate of steady employment between those with degrees and those without, leaving more people reliant upon social services, disparities in retirement savings, as well as increased healthcare costs. A lower education level is directly correlated to unhealthy lifestyles including higher incidences of smoking and obesity (McKinsey, 2009; National Health and Nutrition Examination Survey, 2008; and National Center for Education and Statistics, 2004).

"[A] professional degree holder earns more than three times what a high school graduate makes."
McKinsey, 2009

Changing demographics require new imperatives

We will need to respond urgently and swiftly to the new realities of our changing economics and demographics. Immediately on the horizon, we know that there will be an increase in the number of young people available to enter college who will come from the demographic groups that are not well served in our current education system. Thomas Tierney, co-founder and president of Bridgespan Group, a non-profit organization that provides business management consulting to the non-profit sector, says that over the next two decades "*all of the growth in the U.S. population is projected to come from minority groups, primarily from Hispanics ... to produce the workforce we need, we will have to provide higher education to substantial numbers of students from those groups who have been least likely to enroll and graduate* (Hunt, J. and Tierney, T., 2006)."

This is further supported by a McKinsey report (2009) that predicts that by 2030, the majority of our school age population will be composed predominantly of Hispanics. As a nation, we will need to improve achievement in education in order to meet the workforce demands of the future. These changing demographics indicate that more effort and investment will need to go into providing opportunities to those populations where achievement gaps still remain.

Demographically, a large aging population may require more use of federal resources to support healthcare and retirement benefits which could mean a reduction in taxpayer funding for higher education financial aid.

Hugh Price, a visiting professor at Princeton University and former Vice President of the Rockefeller Foundation and former President/CEO of the National Urban League, says that the "*U.S. economy will rely increasingly upon Latino, African-American and low-income young people in the labor force* (Policy Forum, Brookings Institution, 2007)." To maximize our potential as a nation, we will have to do more to serve these young people. Scholars at the Hamilton Project, an economics policy organization at the Brookings Institution, agree that the biggest potential return on investment (ROI) will be investing in children from disadvantaged families (Bendor, J. et al., 2007).

Increasingly, the ability to pay for post-secondary education is a formidable impediment. As tuition continues to rise, affordability for post-secondary schooling is a great barrier to obtaining higher education degrees (National Center for Public Policy and Higher Education, 2009; Gates Foundation, 2009). The U.S. Census Bureau reports that average annual tuition, room and board for in-state students at four-year public institutions has risen to $13,425, more than double the rates in 1990. For four-year private institutions, the average figure has risen to $36,510, again more than double since 1990. Demographically, a large aging population may require more use of federal resources to support healthcare and retirement benefits which could mean a reduction in taxpayer funding for higher education financial aid.

Great challenges, yet enormous opportunities

With targeted and strategic investments in our education system, the U.S. Army believes that this country can regain the economic pre-eminence it enjoyed after World War II. This resulted, in part, from the passage of the 1944 GI Bill, itself an expression of national will to advance educational opportunities for returning World War II veterans. As a result, the arc of higher education, prosperity and accomplishment in the United States saw unprecedented advancement and growth. Edward Humes, the Pulitzer Prize winning journalist in his book, *Over Here: How the G.I. Bill Transformed the American Dream*, commented on the GI Bill: "*Educations would be made possible for 14 Nobel Prize winners, three Supreme Court justices, three presidents, a dozen senators, two dozen Pulitzer Prize winners, 238,000 teachers, 91,000 scientists, 67,000 doctors, 450,000 engineers, 240,000 accountants, 17,000 journalists, 22,000 dentists – along with a million lawyers, nurses, businessmen, artists, actors, writers, pilots and others.*"

Collaboration among key stakeholders is necessary to promote sustained action for providing quality education for all Americans from cradle to career. This includes interventions in elementary and middle school to increase the motivation, preparedness and competencies of young people entering high school, improving their chances of staying in school and emerging not only with a diploma, but with the skills and capabilities needed to succeed in higher education, work and life.

III. ACHIEVING SUCCESS

Preparing the next generation of global citizens

Army education priorities:

- Supporting the educational pipeline and closing the achievement gap
- Investing in long-term workforce readiness, particularly via STEM education
- Improving college access and affordability
- Increasing post-college career and employment opportunities

The Army brings many assets to bear on these priorities. With its competency in skills training and leadership development, the Army possesses deep understanding of training and mentoring, goal setting and motivation, and character development, which it effectively puts into practice day in and day out. Through its partnerships, the U.S. Army has collaborated with a network of talented educators, schools and programs and developed a range of educational programs and support mechanisms. The following are selected examples, from a broad portfolio, of relevant Army-sponsored programs:

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1. Supporting the educational pipeline and closing the achievement gap

Junior Reserve Officers' Training Corps (JROTC) – Established in 1916 via Congressional mandate, the JROTC is deemed "*The oldest and largest public enterprise for youth development* (Taylor, Jr. William J., 1999)." All military services run JROTC programs, and the Army's is the oldest and largest program. Today, it has over 1,600 units nationwide serving more than 280,000 students. It has made a great effort to meet the needs of disadvantaged students in inner-city neighborhoods. There is no enlistment obligation; rather, its core mission is to develop citizenship and responsibility in young people. Functionally, it operates within existing school systems as a course elective taught by retired military personnel. JROTC emphasizes competency in "soft skills" such as teamwork and leadership, which are becoming increasingly more important in our national emerging workforce. America's Promise Alliance reported that 40 percent of employers said that high school students lack the "soft skills" needed for entry-level and management positions. In addition, JROTC places a priority on physical fitness, an important consideration as concerns mount about the physical health of the nation's youth.

The academic payoff is also very promising. In school year 2006-2007, JROTC cadets outperformed their non-JROTC schoolmates in several key performance indicators (JROTC Educational Briefing Presentation, 2009):

- Attendance: 3 percent higher
- Graduation rate: 12 percent higher
- Detention/suspension: 10 percent lower
- Drop out rate: 2 percent lower
- GPA: .2 percent higher
- SAT: 132.93 points higher

> *"The [JROTC] can provide a fresh start in life for thousands of endangered kids, particularly those from minorities living [in] crime-plagued ghettos. Junior ROTC is a social bargain."*
>
> Former Secretary of State,
> GEN (RET) Colin Powell,
> *My American Journey, 1996*

National Guard Youth ChalleNGe Program – Launched in 1993, the National Guard Youth Challe*NG*e Program is a three-part program consisting of a two-week orientation and assessment period; a 22-week residential program focused on physical development, education and community service; and a one-year post-residential structured mentoring program. Its youth are students ages 16-18 who have dropped out of school. The program has served nearly 75,000 students since inception. Though it is sponsored by the National Guard, participation in the program carries no obligation to enlist for military service.

Evaluation results look very encouraging. During the 22-week residential program, graduates of the program gained an average of 1.5 grades in reading and 2.2 grades in math. Forty-six percent of the Challe*NG*e participants have earned their high school diploma or GED certificate compared with only 10 percent of non-participants. Comparisons between the two groups also showed that Challe*NG*e graduates were more likely to be employed and also more likely to be attending college with 11 percent of the participants taking college courses vs. only 3 percent of the non-Challe*NG*e participants (Price, H., 2008).

Programs and Resources for Educators and Community Leaders – The U.S. Army supports educators via the provision of more than 70 free-of-charge programs and resources for teachers, coaches, school administrators and community organizations for use in the classroom, school and enrichment activities. These resources include science and math enrichment, engineering competitions, internships, leadership development, and a computer-based test readiness program developed by a respected third-party. An inventory of these programs can be found at www.armyedspace.com. These programs are not used for recruiting purposes, and are developed and supported across a number of commands within the Army.

2. Investing in long-term workforce readiness by promoting and enhancing STEM education and careers

March 2 Success (M2S) – March 2 Success is a no cost, online program for high school and college students focused on improving their performance on tests in math, science and English, as well as on ACT, SAT and state standardized tests as mandated under the No Child Left Behind (NCLB) Act. The program uses the same curriculum and test-taking strategies offered through Peterson's, EdOptions and the College Options Foundation – highly reputable leaders in the education test preparation industry. After a successful pilot program in NYC that showed significant increases in test scores, the program was launched nationwide in 2003. Since then, its registration has grown annually with a peak registration of nearly 21,000 users in January 2009. Users can opt out of having their contact information shared with recruiters.

> *"A few months ago I took my ACT and got a 32 with a 26 on math. After only using this site to study, I retook the test and got a 35 with a 34 in math."*
>
> Student User (M2S Web site, accessed July 2009)

The program has embarked on an evaluation study of a school in Florida for students in grades 9-12 who were using it to increase their math skills. Students were engaged in the program over a six-week period for a total of 15 hours without tutoring. Initial results show that test scores increased significantly. In the preliminary analysis, students increased their general principle test scores by 31 percent and problem solving scores by 29 percent.

Health Professions Scholarship Program (HPSP) – The U.S. Army continues to support STEM careers most notably in its support of scholarships in medical fields. The scholarship offers full tuition, plus a substantial monthly stipend to more than 600 highly-qualified applicants annually who have been accepted at an accredited medical, dental or veterinary school, in return for a two- to four-year commissioned service obligation. The monthly stipend alone amounts to about $14 million in financial support for emerging healthcare professionals. In the 25 years since it began, HPSP has provided financial assistance to approximately 15,000 professionals in medical, dental and veterinary fields.

3. Improving college access and affordability for Soldiers

Military service and earning a college degree are not mutually exclusive paths. In fact, it is quite the opposite. Consider:

Concurrent Admissions Program (ConAP) – The Concurrent Admissions Program (ConAP) is a partnership between the U.S. Army Recruiting Command and more than 900 two-year colleges and more than 1,000 four-year. As of July 2009, more than 179,000 Army Soldiers had signed their "College Referral and Intent to Enroll" form, the initial step for pursuing a college degree either during or after enlistment. ConAP goals are to increase the number of Army Soldiers, veterans and reservists enrolled in college, and to leverage GI Bill education benefits. (Note: an expanded version of the GI Bill, including extension of educational benefits to family members of former military personnel, activated in August 2009.)

Tuition Assistance (TA) – In FY08, the Army spent more than $215 million on Soldiers attending classes (2009, Army presentation). It offers up to $4,500 per year per capita in tuition assistance to help support the educational goals of its enlisted personnel. Additionally, the Army provides the Army College Fund and GI Bill options at enlistment, which contributes anywhere from $6,000 to $65,000 toward continuing education during and after service. This assistance will become increasingly more important as college costs continue to rise and competition for taxpayer dollars increases as more federal funds are redirected to support rising healthcare costs and social services for an aging population (Kieran, W., 2006). In 2008, 1,800 Soldiers were awarded AA degrees, 1,400 Soldiers were awarded BA/BS degrees, and 700 Soldiers earned graduate degrees while serving their country.

Army Reserve Officers' Training Corps (ROTC) – ROTC provides another pathway for highly-qualified students and enlisted Soldiers to obtain a post-secondary degree. Since its inception in 1916, Army ROTC has provided leadership and military training at schools and universities across the country and is one of the Army's top training programs for future military leaders. Women were admitted into the Army ROTC in 1976 and comprise 20 percent of the current cadet population. In 2008, the Army endowed more than $283 million in college scholarship money to more than 16,600 ROTC cadets in return for their commitment to serve in the Army. Spread across the United States, the Army ROTC has a total of 273 host programs with more than 1,100 partnership and affiliate schools across the country. Notable alumni of the program include General Colin Powell, former Secretary of State and Chairman of the Joint Chiefs of Staff; Samuel Alito, U.S. Supreme Court Justice; and Samuel Walton, founder of WalMart.

U.S. Military Academy (West Point, NY) – West Point, one of the country's most competitive universities, attracts the country's top students. Known for its academic excellence and its tradition of leadership, the Academy boasts a long list of notable alumni including two Presidents, four heads of state, four current U.S. Congress members, 74 Medal of Honor recipients, 88 Rhodes Scholars, 18 astronauts and three Heisman Trophy winners. Founded in 1802, the Academy has graduated over 50,000 cadets. *Forbes*, *U.S. News and World Report* and the *Princeton Review* have ranked West Point as the top public liberal arts college in the nation. Admission is highly selective with only 12.75 percent of applicants admitted to the class of 2012. Of those admitted, 68 percent ranked in the top fifth of their high school class. Tuition is fully funded in exchange for a minimum of five years of active service duty upon graduation. The approximate cost of attending West Point for four years including tuition, room and board, and fees is $275,000. Recognizing the crucial nature of our global world, 140 West Point cadets studied abroad in the 2009-2010 academic year.

"General Electric sees within the Army Reserve the same kind of characteristics that we see in our own organization – an organization of great integrity, great service and great commitment."

Frank Taylor, Vice President and Chief Security Officer, General Electric Corporation, Employer Partnership Office video interview, Jan. 2009

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4. Increasing employment and career opportunities after military service

Employer Partnership Office (EPO) – This initiative helps link Army Reserve Soldiers with employers around the country. In its first year, the EPO formalized nearly 300 partnerships with businesses in different sectors including engineering, IT, medical and financial services, manufacturing and retail, and local and national government agencies. Partners include such respected organizations as Bausch & Lomb, Dell, Inc., GE, IBM and Boeing Corporation, as well as the U.S. Customs Border Protection. The partnership allows businesses to gain direct access to a highly-trained, highly-skilled workforce among Reserve Soldiers and veterans, thereby reducing training and recruitment costs.

Partnership for Youth Success (PaYS) - The Partnership for Youth Success (PaYS) is a recruiting initiative developed by the U.S. Army Recruiting Command (USAREC) to appeal to young people interested in obtaining a quality civilian job after serving in the Army. The program identifies and matches an enlistee's preferred job skills and career development goals with those skills needed by PaYS partners. Upon enlistment, the enlistee signs a Statement of Understanding (SOU) that lists a PaYS partner company and targeted job and job skills for potential employment opportunity. While the program does not guarantee job placement, it helps establish targeted skills development goals that will help the enlistee cultivate highly-valued skills while in service. Approximately 94 percent of the Army's Military Occupational Specialties (MOS) match civilian jobs that are subject to licensure and certification, and 93 percent of enlisted Soldiers serve in these MOSs making them readily employable by the nation's employers.

Credentialing Opportunities Online (COOL) – Given the challenges of navigating the increasingly complex criteria needed to meet job requirements and credentialing, the Army has created an online tool that seamlessly translates Army training and experience into civilian workforce skills and certification requirements. This tool benefits both potential employers and Soldiers by identifying paths that take advantage of Soldiers' training, skills and workforce readiness.

Officer Candidate School (OCS) – The Officer Candidate School was established in 1941 following the direction of General George Marshall, who recognized the importance of establishing rigorous training facilities for new officers. Today Fort Benning, Ga., is home to the Army OCS, which provides an opportunity for college graduates who desire leadership positions in one of 16 career fields, ranging from communication and personnel management to finance and logistics. Over the course of 12 weeks, their intensive training, which takes place both in the classroom and the field, encourages the development of leadership and problem-solving skills that make them valuable future employees.

The challenge before us is to leverage those assets and what we've learned in even broader partnership with business, education and community leaders.

IV. JOINING FORCES FOR STRONG STUDENTS, STRONG FUTURES, STRONG NATION.

Forging strategic partnerships for the common good

While the U.S. Army has demonstrated leadership and experience in contributing to education and building workforce readiness, greater collaboration among all stakeholders will be necessary to meet our education and workforce challenges. Stakeholders agree that this challenge cannot be addressed by any one single organization.

The U.S. Army has entered strategic partnerships with a number of respected organizations. These partnerships include sponsorship of programs and activities that promote STEM education and careers such as the Army's eCybermission, a popular web-based math and science competition for students in grades 6-9; and partnership with the Great Minds for STEM (formerly HENAAC) and the Society for Hispanic Professional Engineers (SHPE) Conference to support young people interested in science, math and engineering.

Project Lead the Way (PLTW) is a partnership between the Army and several defense agencies and the Ohio Department of Education. It uses technology, gaming and simulation resources to enhance student achievement in math, science and engineering. The partnership expects national deployment of this technology in more than 3,000 high schools in 2010/2011.

At the national leadership level, a recently-formed partnership, formalized via a memorandum of understanding (MOU) signed in November 2009, with the Association of Career and Technical Education (ACTE) is focusing on career planning and pathways, professional development and accreditations. ACTE represents nearly 30,000 career and technical educators, administrators, researchers, guidance counselors and others involved in planning and conducting career and technical education programs at the secondary, post-secondary and adult levels.

A partnership with National Association of State Boards of Education (NASBE) has shown great promise for continued and productive collaboration. NASBE members are responsible for the educational interests of more than 40 million students in public schools and more than three million students in post-secondary institutions. A memorandum of understanding (MOU) signed between the Army and NASBE in March 2009 outlines specific areas for collaboration and action including:

- Building a comprehensive understanding of post-secondary choices for students
- Improving graduation rates
- Improving the health and fitness of high school students
- Expanding career exploration/assessment and test preparation resources for educators and students
- Addressing future teacher shortages, particularly in the areas of science and math

"Ultimately, no single person or organization can solve the problems that face our country. Great ideas must be well supported and financed over time so the solutions are sustained and accessible to all who need them ... to ensure that America lives up to its promise of equal opportunity, all of us — foundations, governments, businesses, and citizens — must do our part. The challenges we face are overwhelming and wide-ranging, but we are optimistic that we can work together and improve the odds for millions of young people to live healthy, productive lives."

Allan Golston, President, U.S. Programs, The Bill & Melinda Gates Foundation (Letter from Allan Golston, The Bill and Melinda Gates Foundation Web Site, accessed July 2009)

"Through this remarkable partnership, we are committing to significant and sustained dialogue – and joint actions – to align the resources of the U.S. Army with the education system to improve outcomes for youth in communities across the country."

Brenda Welburn, Executive Director, National Association of State Boards of Education, March 2009, memorandum of understanding signing ceremony

In working with on-the-ground practitioners, the Army has a solid record of engagement. For example, PHASE 4 Learning Center (P4LC) has partnered with the Army for the past six years to help improve educational and employment outcomes among high school dropouts. Through this partnership, the students enrolled in P4LC programs have benefited from using the Army's resources, such as March 2 Success to improve test scores. P4LC has also received logistical and advisory support from Army leadership. Terrie Suica-Reed, P4LC President and CEO, sits on several Army Community Advisory committees and routinely advises and engages Army leadership on leveraging P4LC success to achieve improved educational outcomes among disadvantaged youths. This partnership helps with her work in nearly 70 school districts that target our most vulnerable students.

With a solid foundation of collaborative partnerships, the Army intends to continue to expand these relationships and create strategic opportunities to help further educational achievement of our nation's youth.

Strong Students, Strong Futures, Strong Nation Educator Conferences

As a result of its commitment, the Army is bringing together such leadership organizations as NASBE, ACTE, the National Governors Association, and the Council of Chief State School Officers. In September 2009, these partnerships produced a conference of 80 leading educators on site at Fort Jackson, S.C., the Army's largest entry level training facility, to constructively discuss and activate strategies to address the challenges facing education and youth. A video of the event and other Army education intiatives is available to watch at http://armyedspace.com/multimedia/videos/05/.

V. CONCLUSION

An urgent call to action

As outlined in this white paper, the U.S. Army is committed to helping close the achievement gap, investing in STEM education and careers, increasing college access and affordability and providing employment and career development opportunities to help build a globally competitive and ready workforce. The Army has developed successful partnerships including its current work with NASBE, ACTE, Great Minds in STEM, SHPE and the PHASE 4 Learning Center. It will continue to examine and enhance its programs and identify and share best practices and resources. Above all, the U.S. Army is eager to use its proven skill as an integrator to bring together concerned and committed leaders representing an array of sectors to create long-term, productive partnerships to address the educational challenges facing our country.

If we do not work together, the leaders of today will leave behind a sad legacy of educational inequity, low performance and lagging competitiveness. Instead, all stakeholder groups including policymakers, business leaders, education leaders, community advocates, associations and other leading national education coalitions and alliances must build strong partnerships to develop the bold and innovative solutions needed for a shared and successful future.

The Army stands ready to collaborate in this endeavor and engage leaders in supporting a strong nation by educating our youth.

"Long before those of us in the field of education became aware, the U.S. Army was already planning for our country's inevitable crisis in education and the threat this would pose to our future ... In order to remain globally competitive, the Army is acutely aware that we need an educated population. With a near 40 percent high school drop out rate nationwide, the Army has maximized efforts and resources to support our educational system, community leaders, and business community to assist as needed through education and comprehensive programs."

Ms. Terrie Suica-Reed, President and CEO, P4LC, personal communications, June 2009

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