A National Defense Education Act for the 21st Century
Renewing our Commitment to U.S. Students, Science, Scholarship, and Security


In 1958, following the Soviet launch of Sputnik, Congress enacted the original National Defense Education Act (NDEA). The NDEA inspired generations of U.S. students to pursue study in fields vital to national security and aided the nation in establishing its dominance in science and technology for the next half century. The NDEA has largely expired, but as we approach its 50th anniversary, the national security and economic challenges facing our nation are as daunting as ever. To meet them, AAU believes we need to inspire a new generation of students to pursue degrees in areas critical to national defense and homeland security. We call upon Congress and the Administration to enact a new comprehensive National Defense Education Act.

AAU Supports the DOD’s new National Defense Education Program.

In its FY 2006 budget request, the Department of Defense requested $10.3 million for a new National Defense Education Program (NDEP). This program would provide scholarships and fellowships to undergraduate and graduate students entering critical fields of science, mathematics, engineering, and languages in return for a commitment of national service after completion of their studies. AAU applauds this new initiative and believes it is a positive step toward addressing U.S. science and engineering (S&E) workforce needs. AAU recommends greatly expanding this initiative in FY 2007 and also suggests that a comprehensive, multi-agency national defense education initiative be developed aimed at stemming national educational deficiencies and encouraging more U.S. students to study in critical fields of knowledge. AAU recommends that the Department of Defense and the National Science Foundation – the federal agencies with primary responsibility for national security and scientific research and education – play a central role in the coordination of this initiative working closely with the Department of Education and the White House Office of Science and Technology Policy.

The NDEA of 1958 transformed the nation’s educational landscape.

The NDEA of 1958 focused primarily on enhancing research facilities and providing fellowships to graduate students pursuing degrees in science, mathematics, engineering, and foreign languages. It also established low-interest loans to encourage students to pursue college degrees in these areas. By supporting students and the nation’s research and education infrastructure, NDEA helped to spur innovation that led to greater national and economic security. The NDEA was also the basis for many current student financial aid programs.

A new NDEA is essential to the nation’s long-term national, homeland, and economic security.

Based on numerous benchmarks contained in a recent report by the Task Force on the Future of American Innovation, the scientific and technological advantage that the U.S. has held over other nations is slipping away (www.futureofinnovation.org). Rapidly developing economies, particularly those in Asia, are vigorously investing in their own research and higher education infrastructures and thus increasing their ability not only to educate their people at home but also to perform cutting-edge research. For reasons of national, homeland, and economic security, the U.S. needs to produce more graduates in critical fields: (1) The Department of Defense (DOD) and the Defense and Aerospace Industries are experiencing significant difficulty attracting and retaining the science and engineering talent they require. (2) As many as 13,000 DOD laboratory scientists will be eligible to retire in the next decade without sufficient numbers of graduating, security-clearable U.S. students to replace them. (3) Thousands more scientists and engineers will be needed in other governmental agencies such as NASA and the Department of Energy as well as in the aerospace and energy-related industries. (4) The military and intelligence communities face an acute shortage of linguists and area specialists in key parts of the world. We must act now to enhance the pipeline of U.S. students trained in fields vital to our national and economic security.

Elements of a NDEA for the 21st Century

A new NDEA for the 21st Century might include: portable graduate fellowships; institutional traineeships; incentives to create professional science and engineering programs; undergraduate loan forgiveness; grants to support new and innovative undergraduate curriculum and research programs; grants to expand K-12 education outreach; summer training and research opportunities for K-12 teachers; employer S&E and foreign language educational tax breaks; national laboratory and federal service professional incentives; and additional funds for program evaluation. In addition, AAU universities are exploring ways they can increase the number of U.S. students in critical fields.