

OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

Date: February 2006

APPROPRIATION/ BUDGET ACTIVITY
RDT&E/ Defense Wide BA# 1

PE NUMBER AND TITLE

0601120D8Z - National Defense Education Program (NDEP)

Cost (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Program Element (PE) Cost	2.106	10.119	19.532	26.075	31.663	52.895	74.396
P120 National Defense Education Act (NDEA)	2.106	10.119	19.532	26.075	31.663	52.895	74.396

A. Mission Description and Budget Item Justification: A. Mission Description and Budget Item Justification: (U) The Department of Defense is confronted with a continuing challenge in educating, training, recruiting, and retaining individuals in certain science, mathematics, and engineering, disciplines that are critical to the national security functions of the Department. The Science, Mathematics and Research for Transformation (SMART) Defense Education Program is a program mandated by Congress in Section 1101 of the National Defense Authorization Act (NDAA) for Fiscal Year 2005 and amended in the National Defense Authorization Act of 2006 that intends to address these needs. SMART will permit current and future scientists, mathematicians, engineers, and technicians to receive scholarships at the associates, undergraduate and graduate levels and gain experience that will develop well rounded individuals that are exceptionally trained and equipped with skills and talents relevant to specific needs identified within the department. Recipients will be required to enter into civilian service for a period of time commensurate with the support they have received.

(U) The NDAA of 2006 amendment to SMART permits DoD to execute a more comprehensive approach to development of a workforce capable of dealing with demands and challenges in skills and disciplines that, as determined by the Secretary, are critical to the national security functions of the Department of Defense. The amendment establishes a permanent program, rather than a pilot, to increase the development, recruitment, and retention of individuals with knowledge, skills, and abilities in disciplines critical to the Department of Defense; expands the degrees covered by the program to include assistance for study toward an associate's degree; authorizes the Department of Defense to employ recipients of scholarships and fellowships in over-strength positions both while pursuing their studies and for up to two years after completion of their studies; increases the range of allowable expenses for which financial assistance may be provided; and contains flexibilities such that internship opportunities may be incorporated into recipients' programs.

(U) The need to improve the science, technology, engineering and mathematics (STEM) education at all levels across the nation is immediate. Numerous reports from within the U.S. defense science and engineering community and elsewhere warn of the long-term downward trend in defense relevant science and engineering degrees at all levels awarded to U.S. citizens, whether native-born or naturalized, and the erosion of US competency in math and science at the middle and high school levels. Basic science and mathematics literacy gained in grades K-12 form the foundation of a capable technical workforce. A comprehensive solution to address science and engineering workforce needs requires a comprehensive plan to address science, technology, engineering and mathematics education needs at all levels of education (K-20+). Sustainable change in STEM education arena begins at primary and secondary education levels with substantial evidence of impact being demonstrated as those graduates make choices relating to postsecondary education and employment tracks. Authority for the DoD to provide education intervention activities is broad and a great many activities are underway across the education spectrum. The NDEP will become a cornerstone effort to catalyze the integration STEM intervention efforts and address needs at the interface between mid and late term education and defense community employment.

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	2.500	10.282	10.270
Current BES/President's Budget (FY 2007)	2.106	10.119	19.532

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Total Adjustments	-0.394	-0.163	9.262
Congressional Program Reductions		-0.163	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-0.300		
SBIR/STTR Transfer	-0.069		
Other	-0.025		9.262

C. Other Program Funding Summary: Not Applicable.

D. Acquisition Strategy: Not Applicable.

E. Performance Metrics:

FY	Strategic Goals Supported	Existing Baseline	Planned Performance Improvement / Requirement Goal	Actual Performance Improvement	Planned Performance Metric / Methods of Measurement	Actual Performance Metric / Methods of Measurement
07						

Comment: 1. Data will be gathered and analyzed annually to assess program execution including level of interest in the program, level of satisfaction and ability of graduates to meet the expectations of sponsoring services and agencies. Performance of scholars and fellows and placement will be tracked, services and agencies will be queried in order to identify any need for programmatic adjustments in order to maximize program benefits to DoD.

OSD RDT&E PROJECT JUSTIFICATION (R2a Exhibit)

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RDT&E/ Defense Wide BA# 1PE NUMBER AND TITLE
0601120D8Z - National Defense Education Act (NDEA)PROJECT
P120

Cost (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
P120 National Defense Education Act (NDEA)	2.106	10.119	19.532	26.075	31.663	52.895	74.396

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B. Accomplishments/Planned Program:

Accomplishment/Planned Program Title	FY 2005	FY 2006	FY 2007
Science, Mathematics and Research for Transformation (SMART)	2.106	10.119	19.532
FY 2005 Accomplishment:			

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P120

(U) The Science, Mathematics and Research for Transformation (SMART) Defense Scholarship Pilot Program will help the Department of Defense address a continuing challenge in educating, training, recruiting, and retaining individuals in certain science, mathematics, engineering, and language disciplines that are critical to the national security functions of the Department.

(U) Scholarships/Fellowships. Services and Agencies developed and executed the SMART Pilot Program (FY 2005 Pilot status changed to Permanent in FY 2006) inviting applications from the public and defense employees for not more than the last two years of educational support in disciplines deemed critical to national defense at the undergraduate and graduate degree levels. Recipients will be required to enter into an agreement for civil service that is commensurate with the support received.

(U) Awards: thirty two awards were made to individuals pursuing bachelors, masters and PhD degrees in fields identified by the DoD.

FY 2006 Plans: (U) Scholarships/Fellowships. Services and Agencies will develop and execute the SMART permanent program inviting applications from the public and defense employees for educational support in skills and disciplines deemed critical to national defense at the associate, undergraduate and graduate degree levels. Recipients will receive a higher level of integration into and familiarity with the DoD S&T community and its needs and will be required to enter into an agreement for civil service that is commensurate with the support received. Assessment of the utility of the SMART program will begin.

FY 2007 Plans: (U) Scholarships/Fellowships. Services and Agencies will refine and execute the SMART program inviting applications from the public and defense employees for educational support in skills and disciplines deemed critical to national defense at the associate, undergraduate and graduate degree levels. The program will be modified as needed based upon input from the previous year execution lessons learned. Recipients will receive a high level of integration into and familiarity with the DoD S&T community and its needs and will be required to enter into an agreement for civil service that is commensurate with the support received. Assessment of the utility of the SMART program will continue.

(U) Integration and coordination of DoD K-12+ STEM activities will improve effectiveness and offer implications that extend far beyond DoD. The K-12+ STEM integration effort will focus on stimulating student interest and improving teacher capability in science and math education by expanding programs with evidence of impact in a manner that improves opportunities for partnership with public and private stakeholders. For example, DoD intends to expand Materials World Modules, an evidence based catalytic program that provides an exceptional fit with DoD interests and assets, offers intervention in both middle and high school and is easily implemented through our laboratories or by others.

(U) Institutional Scholarships/Fellowships component (akin to a Traineeship, where funds are provided to a competitively selected institution to educate and train individuals to meet specific discipline needs in a critical mass learning environment) will be added to the SMART program. Competitively awarded Institutional Scholarships/Fellowships are an important programmatic component because they provide an opportunity to leverage existing unique institutional teaching talent and infrastructure, and other institutional research and development dollars. The program enhancement will maintain a focus on U.S. citizens pursuing undergraduate and graduate degrees in selected fields of critical interest to the Department.

C. Other Program Funding Summary: Not Applicable.

D. Acquisition Strategy: Not Applicable.

E. Major Performers

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PROJECT
P120

Category	Name	Location	Type of Work and Description	Award Date
Labs				
	Air Force Office of Scientific Research	Arlington, VA	These funds are provided for the execution of the Science Mathematics and Research for Transformation (SMART), Pilot Scholarship Program.	26 APR 2005