

Highlights of the President's FY 2006 Budget Proposal Related to Science, Technology, Engineering, and Mathematics (STEM) Education

On February 7th, the President delivered his fiscal year 2006 budget to Capitol Hill. The 2.6 trillion dollar budget proposal carries a deficit projection of 390 billion dollars, down from the 2005 projection of 427 billion dollars. The deficit is forecast to fall to 1.5 percent of GDP by 2009. Overall discretionary spending rises by just 2.1 percent. Non-security discretionary spending falls by nearly 1 percent, the tightest restraint proposed since the Reagan Administration.

Department of Education

The budget proposal from the Administration notes that there are more than 150 programs cut across the board in 2006. Of those, nearly one third, 48 of them, are in the Department of Education.

The Administration's proposal for the Department of Education would decrease funding overall by 1% to \$56 billion. If approved by Congress it would be the first decrease in education funding in a decade.

Areas with increased funding include: *(Note: Percentages relate to FY 05 Appropriations)*

▲ Title I Grants to LEAs	up 4.7%	(+\$600 million)
▲ Reading First State Grants	up 23%	(+\$195 million)
▲ Striving Readers	up 706.5%	(+\$175 million)
▲ Math Science Partnerships	up 51%	(+\$90.4 million)
▲ Advance Placement Program	up 73%	(+\$21.7 million)
▲ Pell Grants	up 6.7%	(+\$834 million)
▲ High School Intervention	new program	(+\$1.24 billion)

The following programs have been significantly reduced in the budget proposal:

▲ School Improvement Programs	down 5.1%	(-\$287.4 million)
▲ Advanced Credentialing	down 52.6%	(-\$8.9 million)
▲ FIE Programs	down 88.7%	(-\$228 million)
▲ Safe Schools	down 53.9%	(-\$464 million)
▲ Vocational and Adult Education	down 89.3%	(-\$1.8 billion)
▲ Higher Education	down 43.2%	(-\$915 million)
▲ Institute of Education Sciences	down 8.4%	(-\$44 million)

The following programs have been eliminated or zeroed out of the proposed FY 06 budget:

- ▲ Education for the Disadvantaged
 - Even Start (ESEA I-B-3)
 - Comprehensive School Reform (ESEA 1501 and 1503)
- ▲ School Improvement Programs
 - Educational Technology State Grants (ESEA Title II D-1 and 2)
 - Javits Gifted and Talented Education (ESEA Title V Part D-6)
 - Foreign Language Assistance (ESEA Title V Part D-9)

▲ Innovation and Improvement

- National Writing Project (ESEA Title II Part C-2)
- School Leadership (ESEA Section 2151-b)
- School Dropout Prevention (ESEA Title I Part H)
- Close-up Fellowships (ESEA Section 1504)
- Star Schools (ESEA Title V Part D-7)
- Ready to Teach (ESEA Title V Part D-8)
- Exchanges with Historic Whaling and Trading Partners (ESEA Title V Part D-12)
- Excellence in Economic Education (ESEA Title V Part D-13)
- Mental Health Integration (ESEA Title V Part D-14)
- Foundations for Learning (ESEA Title V Part D-14)
- Arts in Education (ESEA Title V Part D-15)
- Parental Information and Resource Centers (ESEA Title V Part D-16)
- Women's Educational Equity (ESEA Title V Part D-21)

▲ Safe Schools and Citizenship Education

- Safe and Drug Free Schools (ESEA Title IV Part A)
- Alcohol Abuse Reduction (ESEA Section 4129)
- Elementary and Secondary School Counseling (ESEA Title V Part D-2)
- We The People (ESEA Title II Part C-3 Section 2344)
- Cooperative Education Exchange (ESEA Title II Part C-3 Section 2345)
- State Grants for Incarcerated Youth Offenders
- Literacy Programs for Prisoners

▲ Special Education IDEA

- State Personnel Grants (Part D-1)

▲ Rehabilitation Services and Disability Research

- Migrant and Seasonal Farmworkers (RA Section 303)
- Recreation Programs (RA Section 305)
- Projects with Industry (RA Section VI-A)
- Supported Employment State Grants (RA VI-B)
- Assistive Technology Programs (Sections 4, 5, and 6)

▲ Vocational and Adult Education

- Perkins State Grants
- National Programs
- Occupational and Employment Information
- Tech-Prep Education State Grants
- Tech-Prep Demonstration Program
- Smaller Learning Communities
- Community Technology Centers
- Student Financial Assistance
- Leveraging Educational Assistance Partnership (HEA Title IV Part A-4)

▲ Higher Education

- Demonstration projects to ensure quality higher education for students with disabilities
- GEAR UP
- Byrd Honors Scholars
- Thurgood Marshall Legal Education Opportunity Program
- B.J. Stupak Olympic Scholarships
- Teacher Quality Enhancement
- Underground Railroad Program

▲ Institute of Education Sciences

- Regional Educational Research Laboratories

The FY 05 budget has significant implications for the math and science communities. A great deal of the President's education initiatives are presented as strategies to help bolster math and science education programs, as well as teacher professional development, throughout the U.S. education system. These are areas that have been described in the past by the Administration, as well as some in the corporate sector, as "inadequate." Emphasis has been placed on the need to better educate students in math and science in order for young Americans to remain competitive in the modern global workforce.

This year's Math Science Partnership program is once again proposed to be funded at the \$269 million level but with a restriction on \$120 million to be managed by the Department of Education to fund high school math initiatives. The net effect of this restriction is a reduction of the discretionary funding available to States from the FY 2005 level of \$179.4 million to \$149 million (\$269 million, less the \$120 million set aside for math, leaving \$149 million for State block grants). The new High School Initiative under Elementary and Secondary Education is funded primarily from the elimination of most of the programs in the Office of Vocational and Adult Education. These funds were, in effect, transferred to the High School Intervention Initiative. According to the Administration the High School Intervention Initiative would provide States with flexible resources that could be used in their efforts to improve high school education and raise student achievement. The funds would be used for vocational education, tech-prep programs and other purposes depending on the priorities set by the State and local authorities. While it could potentially give the States more flexibility, it would also increase the accountability requirements. Within the High School Initiative there is an additional \$250 million for High School Assessments in reading/language arts and mathematics.

National Science Foundation

The total National Science Foundation (NSF) budget request is \$5.605 billion, a \$132 million increase (2.4%) over FY 05. Within the NSF budget, funding priorities appear to be directed to areas that have more immediate implications in the defense/intelligence/homeland security arenas such as nanotechnology and IT networking and security research and development. The Research and Related Activities Budget would grow by 2.7% or \$113 million while the Equipment and Facilities budget grows by another \$76 million or 43.9%. Education and Human Resources (EHR) decreases for the second straight year. Overall EHR will sustain a \$104 million or 12.4% cut.

Under the Administration's proposed budget, the Math and Science Partnerships would only receive \$60 million, a decrease of \$19.4 million or 24.4% over the 2005 appropriation. These

funds would only allow NSF to meet its obligations to existing programs and would eliminate once again any opportunity to expand this program.

EPSCoR, the Department of Graduate Education, and Human Resource Development funding would remain essentially level with the 2005 budget appropriation; all other areas within EHR will sustain reductions. Elementary, Secondary and Informal Education (ESIE) is cut by \$41 million or nearly 23%, Undergraduate Education is reduced by \$18.7 million or 12% and the Research, Evaluation and Communication Directorate sustains a \$25.7 million or 43% cut.

The \$41 million decrease in the ESIE budget will mean that the Teacher Professional Continuum (TPC) program will be cut by \$27.2 million. TPC funds are used to promote large-scale district efforts to improve teacher quality. With the reduction, the program will focus on elementary education in 2006 and expects to be able to fund about 30 proposals. Instructional Materials Development will be reduced by \$9.5 million or about 33%. With the decreased funding, NSF indicates that the FY 2006 strategy would fund fewer large-scale evaluations of K-12 curricula and support no new activities to create materials for high school science and laboratory, or for engineering and technology education.

The Department of Undergraduate Education sustains its greatest losses in the Curriculum, Laboratory and Instructional Development area with a reduction of \$14.4 million or 15.3%. Course, Curriculum and Laboratory Improvement (CCLI) is reduced by \$9.64 million the largest single cut in this directorate. In addition, the National Science Digital Library (NSDL) is cut by \$3.43 million or 18.6%. NSDL supports a national digital library that comprises an online network of learning environments and resources for STEM education at all levels, both formal and informal. These programs make up the majority of the budget reductions in this area.

The Research, Evaluation and Communication (REC) budget for 2006 is \$25.7 million less than the 2005 appropriated budget. The largest cut in the REC budget is in the research side, with a reduction of \$20.9 million or 41.6%. Fourteen million dollars of that is in the Research on Learning and Education (ROLE) program. To enhance STEM education ROLE seeks to develop research-based learning tools and pedagogical approaches and to examine overall curriculum structure. The program aims to increase the knowledge of learning, teaching and organizational models that lead to substantial and large-scale improvement in the efficiency, efficacy and cost-effectiveness of the United States educational system.

The other major component of the REC budget reduction is the Interagency Education Research Initiative (IERI). IERI funds research on the scaling up of STEM technology-based learning interventions, that have been proven successful in small, well-controlled studies, to real school environments. IERI is being phased out, and accordingly the budget is being reduced by 56% from \$12 million in FY 2005 to \$5.3 million in FY 2006. There will be no new awards under this budget proposal in 2006.

Several of the programs at the National Science Foundation that target the improvement of STEM education are taking significant reductions under the Administration's proposed budget. The National Science Foundation has been the leader in research and innovation with regard to STEM education and the evaluation and peer review process has led to the development of many of the programs that are currently used within the state and local education agencies. While programmatic funding may be well served under the Department of Education the innovation needed to create change in STEM education will be adversely affected by the reduction in the NSF budget for Education and Human Resources.