

## **Congress Advances Multiyear Science and Education Plan**

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Source: BioScience, 57(8) : 654

Published By: American Institute of Biological Sciences

URL: <https://doi.org/10.1641/B570804>

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# Congress Advances Multiyear Science and Education Plan

ROBERT E. GROPP

**B**efore leaving Washington, DC, for the August district work period, the Senate and the House of Representatives passed legislation authorizing \$43.3 billion for science and science education programs at various federal agencies, and President George W. Bush signed the act into law on 9 August. The passage of HR 2272, the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act (America COMPETES), marks the culmination of one and a half years of legislative wrangling in both chambers of Congress.

The stated purpose of the act is “to invest in innovation and education to improve the competitiveness of the United States in the global economy.” In essence, HR 2272 is a response to the recommendations made in the 2005 National Academies report *Rising Above the Gathering Storm*. According to documents from the Office of the Speaker of the House, America COMPETES establishes a multiyear framework for a federal emphasis on math, science, engineering, and technology education, as well as a renewed commitment to basic research. Ultimately, HR 2272 is a bipartisan compromise between prior House- and Senate-passed legislation authorizing programs and funding for US research agencies and departments: the National Science Foundation (NSF), Department of Energy, National Institute of Standards and Technology, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, and Department of Education.

The legislation maintains the trajectory for doubling NSF’s budget over the next seven years. However, Representative Bart Gordon (D-TN), chairman of the House Science and Technology Committee, noted that although the measure authorizes funding at what

legislators think is a “responsible” level, the appropriations committees will have to determine whether that amount “is going to be too much money.” Indeed, many of the 57 House members who voted against HR 2272 (56 of whom are Republicans) said they did so because of the high level of funding.

Although he supported its final passage, Representative Ralph M. Hall (R-TX), the ranking Republican on the Science and Technology Committee, expressed his concern about the cost of the final measure: “I...tried in Committee and in Conference to address these concerns. First and foremost was the cost. The House passed a \$24 billion bill that roughly mirrored the President’s ACI [American Competitive Initiative]...and even increased the budget in many areas. However, this conference report goes way beyond that amount to authorize \$43.3 billion in spending.” Wisconsin Representative F. James Sensenbrenner (R) echoed this concern, warning that Congress was creating expectations that could not be met, because appropriators most likely will not provide full funding for the various programs authorized by the legislation.

Yet House Speaker Nancy Pelosi (D-CA), evoking President Kennedy’s call for US leadership in space, urged House members to support the legislation because of its importance to the future. “In education, the COMPETES Act recognizes that America’s greatest resources for innovation are in classrooms across this country,” she said. “This legislation invests in creating the most highly qualified teachers, and training the next generation of scientists, mathematicians, and engineers through public-private partnerships.”

According to NSF data, in the 2002 academic year, 17 to 28 percent of

public high school mathematics and science teachers lacked full certification in their teaching field. In academic year 1999, between 23 and 29 percent of public middle- and high-school mathematics and science teachers did not have a college major or minor in their teaching field. “We have to better prepare the teacher,” said Chairman Gordon.

Because so many teachers lack subject matter expertise, America COMPETES includes funding for two teacher scholarship programs, one of which provides support for new teachers, and the other helps current teachers secure certification. As Chairman Gordon noted during a press briefing before House consideration of HR 2272, the legislation goes beyond the production of new science PhDs. It also makes important strides toward improving the science and technology skills of high school, junior college, and baccalaureate graduates, he said.

Although Congress frequently becomes mired in partisan and jurisdictional squabbles, the passage of HR 2272 demonstrates that a broad cross-section of stakeholders from business, education, and academe can collectively advance a sweeping policy initiative. Nevertheless, enthusiasm for popular legislation does not ensure that programs authorized under it will produce the anticipated benefits. That outcome is contingent on the implementation of the programs and on their operating budgets.

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doi:10.1641/B570804

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