

STEM Education Coalition



Science, Technology, Engineering and Mathematics

November 9, 2007

The Honorable George Miller
Chairman
House Committee on Education and Labor
U. S. House of Representatives
Washington, DC 20515

The Honorable Howard “Buck” McKeon
Ranking Member
House Committee on Education and Labor
U.S. House of Representatives
Washington, DC 20515

The Honorable Ruben Hinojosa
Chairman
House Subcommittee on Higher Education,
Lifelong Learning, and Competitiveness
U.S. House of Representatives
Washington, DC 20515

The Honorable Ric Keller
Ranking Member
House Subcommittee on Higher Education,
Lifelong Learning, and Competitiveness
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Miller, Ranking Member McKeon, Chairman Hinojosa and Ranking Member Keller:

As you and your colleagues turn to consideration of legislation that would reauthorize the Higher Education Act (HEA), the Science, Technology, Engineering, and Mathematics (STEM) Education Coalition would like to thank you for your extensive efforts to address STEM education issues in a range of major legislation and to offer our recommendations on several issues we hope you will address in a broader HEA reauthorization measure.

As you know, our Coalition is composed of a diverse range of stakeholders; collectively, we represent all sectors of the technological workforce—from knowledge workers, to educators, scientists, engineers, technicians, and representatives from the business community. We believe that excellence in STEM education at all levels, among all populations, is vital to our nation’s long-term economic prosperity, global competitiveness and homeland security. Your support for the America COMPETES Act, the hearings you have held on STEM education issues, and the bipartisan discussion draft of legislation to reauthorize the Elementary and Secondary Education Act reveal common interests and goals in this area, and we thank you for your support and effort.

We are encouraged by the prospect of imminent action to reauthorize the Higher Education Act and we urge you and your colleagues to work with the Senate to complete action on a comprehensive bill by year’s end. We believe that three basic STEM education efforts should be incorporated into HEA legislation:

- Strong support for STEM teacher professional development
- Meaningful incentives to encourage students to obtain STEM degrees and pursue STEM-related careers
- Expansion of efforts to encourage diversity in the STEM workforce by increasing the participation of underrepresented groups

STEM Teacher Professional Development

We hope that the House's proposal will echo the Senate's package, the Higher Education Amendments of 2007 (S. 1642), related to Title II programs for teacher professional development. The Senate bill recognizes and invests in teacher quality as an essential component of improving student achievement, and educators must be well prepared in content and pedagogy before entering the classroom. Further, the Senate's proposal acknowledges the importance and benefits of induction and mentoring programs by incorporating them into pre-service efforts. We strongly support these changes.

Incentives to Encourage Students to Obtain STEM Degrees and Pursue STEM-related Careers

Over the past several years, Congress and our Coalition have worked to address issues related to the global competitiveness of our nation, and especially the need to ensure that more of our best and brightest students – from all backgrounds of our society – are entering the STEM fields. Enactment of the American Competitiveness (AC) and the National Science and Mathematics Access to Retain Talent (SMART) Grants, which were created by the Higher Education Reconciliation Act of 2005, was a significant and positive accomplishment. These programs were intended to encourage students to take more challenging courses in high school—making success in college more likely—and to pursue college majors in high demand in the global economy, such as science, mathematics, technology, engineering and critical foreign languages.

We believe these programs are yielding benefits and suggest that the Committee continue this program. We also suggest that you closely review the program and pursue the necessary technical changes required to ensure that its eligibility requirements mirror those of other student aid programs and make part-time students and those enrolled in certificate or other credential programs eligible for the programs. In addition, we support changes that would allow students enrolled in dual enrollment programs in secondary schools to receive these funds.

Encouraging diversity in the STEM workforce

Another important, but often-overlooked, effort in the realm of STEM education is the Minority Science and Engineering Improvement Program (MSEIP). One of the central goals of our Coalition has been to support new and innovative initiatives to encourage more of our best and brightest students, especially those from underrepresented or disadvantaged groups, to study in STEM fields. The increased participation of demographic groups that are underrepresented in the STEM fields is essential to supplying the American economy with the expertise our nation needs to remain the world's most innovative and prosperous nation. The MSEIP invests in encouraging young minority students interested in science and engineering to pursue those fields. This program has seen good results since its inception, but is stifled by an insufficient authorization. We recommend that you expand the MSEIP so that more universities and communities can build greater capacity to expose their young people to the opportunities provided by STEM careers.

In closing, we hope that you will consider the Higher Education Act as an opportunity to enhance and improve STEM education in the United States. If you or your staff have any questions, please do not hesitate to contact James Brown at 202-872-6229 or Jodi Peterson at 703-312-9214.

Sincerely,

American Association of Colleges of Teacher Education
American Association of Physicists in Medicine
American Association of University Women
American Chemical Society
AIAA-American Institute of Aeronautics and Astronautics
American Society of Civil Engineers
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
Association of Science-Technology Centers
Association for Computing Machinery
ASTRA-The Alliance for Science & Technology Research in America
Business-Higher Education Forum
Chesapeake Bay Foundation
Chicago Educational Publishing Company
Council on Undergraduate Education
Computing Research Association
Education Development Center, Inc.
Exploratorium
Institute of Food Technologists
International Technology Education Association
Museum of Science-Boston
National Center for Technological Literacy
National Council of Teachers of Mathematics
National Science Teachers Association
National Society of Professional Engineers
National Venture Capital Association
The Ohio Academy of Science
Ohio Technology Education Association
Optical Society of America
Project Lead the Way
SAE International
Society of Women Engineers
STEMES
Triangle Coalition
Women in Engineering Programs & Advocates Network