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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION

Governmentwide Strategy Needed to Better Manage Overlapping Programs

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Highlights

Highlights of GAO-13-529T, a testimony before the Subcommittee on Early Childhood, Elementary, and Secondary Education, Committee on Education and the Workforce, House of Representatives

Why GAO Did This Study

STEM education programs help to enhance the nation's global competitiveness. Many federal agencies have been involved in administering these programs. Concerns have been raised about the overall effectiveness and efficiency of STEM education programs.

This testimony discusses (1) the number of federal agencies and programs that provided funding for STEM education programs in fiscal year 2010; (2) the extent to which STEM education programs overlap; and (3) the extent to which STEM education programs measured effectiveness and were aligned to a governmentwide strategy. This testimony is based on several previously published GAO reports and includes updates on actions taken in response to these reports.

What GAO Recommends

GAO previously recommended that the Office of Science and Technology Policy (OSTP) should direct the National Science and Technology Council (NSTC) to work with agencies to better align their activities with a governmentwide strategy, develop a plan for sustained monitoring of coordination, identify programs for consolidation or potential elimination, and assist agencies in determining how to better evaluate their programs. Since GAO's report, OSTP released a progress report that identified some programs for elimination, and the Office of Management and Budget (OMB) named STEM education one of its interim cross-cutting priority goals.

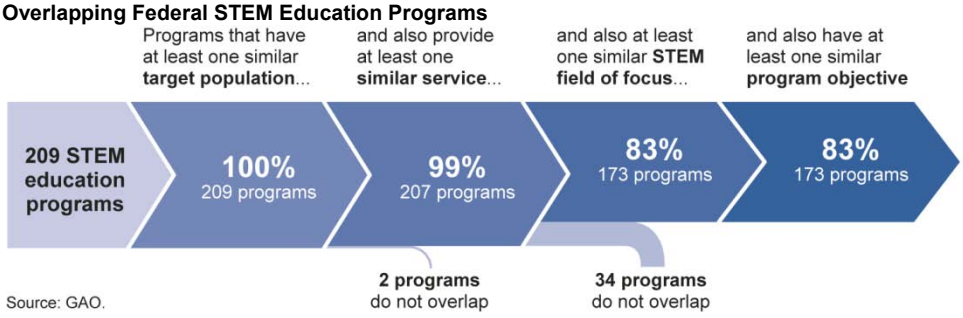
View GAO-13-529T. For more information, contact George A. Scott at (202) 512-7215 or scottg@gao.gov.

What GAO Found

In fiscal year 2010, 13 federal agencies invested over $3 billion in 209 programs designed to increase knowledge of science, technology, engineering, and mathematics (STEM) fields and attainment of STEM degrees. The number of programs within agencies ranged from 3 to 46, with the Department of Health and Human Services, Department of Energy, and the National Science Foundation administering more than half of the 209 programs. Almost a third of all programs had obligations of $1 million or less, while some had obligations of over $100 million. Beyond programs specifically focused on STEM education, agencies funded other broad efforts that contributed to enhancing STEM education.

Eighty-three percent of the programs GAO identified overlapped to some degree with at least 1 other program in that they offered similar services to similar target groups in similar STEM fields to achieve similar objectives. Many programs have a broad scope—serving multiple target groups with multiple services. However, even when programs overlap, the services they provide and the populations they serve may differ in meaningful ways and would therefore not necessarily be duplicative. Nonetheless, the programs are similar enough that they need to be well coordinated and guided by a robust strategic plan.

Overlapping Federal STEM Education Programs



Source: GAO.

Agencies' limited use of performance measures and evaluations may hamper their ability to assess the effectiveness of their individual programs as well as the overall STEM education effort. Specifically, program officials varied in their ability to provide reliable output measures—for example, the number of students, teachers, or institutions directly served by their program. Further, most agencies did not use outcomes measures in a way that is clearly reflected in their performance planning documents. In addition, a majority of programs did not conduct comprehensive evaluations since our prior review in 2005 and the time of our survey in 2011 to assess effectiveness, and the evaluations GAO reviewed did not always align with program objectives. Finally, GAO found that completed STEM education evaluation results had not always been disseminated in a fashion that facilitated knowledge sharing between both practitioners and researchers. In naming STEM education as a crosscutting goal, the administration is taking the first step towards better governmentwide coordinated planning; however, it will be important to finalize a governmentwide strategic plan so agencies can better align their performance plans and reports to new governmentwide goals.