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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION

Actions Needed to Better Assess the Federal Investment

GAO Highlights

Highlights of GAO-18-290, a report to congressional requesters

Why GAO Did This Study

Education programs in STEM fields are intended to enhance the nation's global competitiveness. GAO reported in 2012 that there were more than 200 federal STEM education programs in fiscal year 2010. Since then, this portfolio of programs has changed. GAO was asked to review the landscape of federal STEM education programs.

This report examines (1) how the federal investment in STEM education programs changed from 2010 to 2016, and (2) the extent to which the STEM education portfolio has been assessed. To answer these questions, GAO administered a web-based questionnaire to all federal STEM education programs funded in fiscal year 2016 and analyzed the results. GAO also reviewed relevant federal laws and agency documents, examined the implementation of relevant assessment requirements, and interviewed officials from relevant federal agencies.

What GAO Recommends

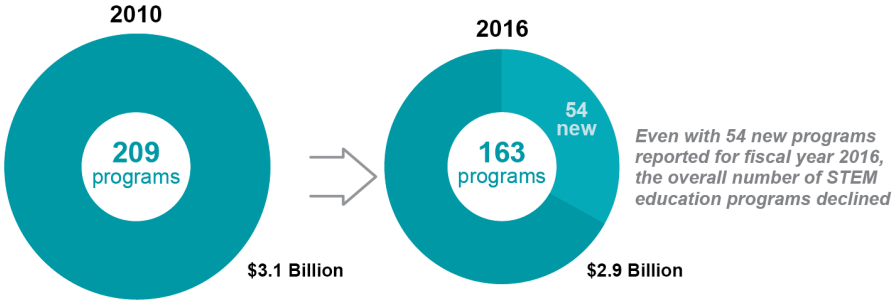
GAO is making four recommendations, including three to the Committee on STEM Education to review performance assessments of STEM education programs, document those assessments, and report programs' participation rates of underrepresented groups. The Committee on STEM Education agreed with GAO's recommendations.

View GAO-18-290. For more information, contact Melissa Emrey-Arras at (617) 788-0534 or EmreyArrasM@gao.gov.

What GAO Found

The federal investment in science, technology, engineering, and mathematics (STEM) education programs remained relatively stable from fiscal years 2010 to 2016, although the number of programs declined from 209 to 163 (see figure). While agencies reported that many of the same STEM education programs existed during this time period, the portfolio underwent various changes, including program consolidations, creations, and terminations. Nearly all STEM education programs in fiscal year 2016 overlapped to some degree with at least one other program in that they offered similar services to similar groups in similar STEM fields to achieve similar objectives. The Committee on STEM Education, an interagency body responsible for implementing the federal STEM education strategic plan, reported it managed this overlap through coordination with agencies administering these programs.

Number of Federal Science, Technology, Engineering, and Mathematics (STEM) Education Programs Reported in Fiscal Years 2010 and 2016



Source: GAO analysis of information reported by agency officials on STEM education programs. | GAO-18-290

The Committee on STEM Education has not fully met its responsibilities to assess the federal STEM education portfolio. Specifically, the Committee has not reviewed programs' performance assessments, as required by its authorizing charter, nor has it documented those assessments in its inventory, as required by law. Such efforts could encourage the use of evidenced-based practices across the portfolio—a key national goal of the STEM education strategic plan. These efforts could also enhance public awareness of the administering agencies' efforts to assess programs' performance. In addition, the Committee has not reported the participation rates of underrepresented groups in federal STEM education programs, as required by law. By reporting this information, the Committee could better assess whether programs are broadening access to groups historically underrepresented in STEM fields—another key goal of the strategic plan.