



NEWS RELEASE
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New Study Helps Define Afterschool Programs' Role in STEM Education

Consensus Among Afterschool Providers and Experts Reflects Afterschool Community's Judgment on Its Niche in Educating Tomorrow's STEM Workforce

WASHINGTON, D.C.—In recent years, afterschool programs around the nation have staked out a major role in preparing students for careers in science, technology, engineering and mathematics (STEM) fields. But policymakers, afterschool leaders and others have sometimes held varying expectations about what these programs could accomplish in STEM areas.

Now, a unique study of afterschool providers and leaders in the field has identified a consensus within the afterschool community on achievable STEM outcomes for afterschool programs and their participants: student interest, engagement and valuing STEM goals. The research, conducted by the Afterschool Alliance, was released this morning at a STEM Salon hosted by Change the Equation.

The study, "[Defining Youth Outcomes for STEM Learning in Afterschool](#)," aims to identify the outcomes that afterschool program leaders and supporters believe the field can contribute to, the indicators of progress toward those outcomes, the types of evidence that can be collected by the afterschool field to measure success, and whether or not appropriate data-collection tools already exist. The results are intended to give voice to the afterschool community in policy discussions around the role of afterschool in STEM education. The report includes recommendations for policymakers, so they can develop a realistic vision of what afterschool programs can accomplish; afterschool program leaders, so they can set appropriate and measurable goals; and researchers and evaluators, so they can design appropriate assessment tools.

"Education policymakers are rightly looking to afterschool programs as a key player in the effort to build our future workforce's STEM skills," said Anita Krishnamurthi, the Afterschool Alliance's director of STEM policy. "That conversation needs to reflect the best judgment of the afterschool community, and that's what we set out to capture. The bottom line from the study is that afterschool programs can contribute in important ways that help students achieve in the STEM fields, by drawing them into STEM and helping them learn the foundational skills they need to succeed. Moreover, afterschool can help expand the universe of students interested in STEM fields—a huge contribution to the effort to build a 21st century workforce."

The study used a Delphi methodology, taking an iterative approach to reaching consensus across disparate expert perspectives, surveying a panel of 55 experienced afterschool providers and a

panel of 25 afterschool STEM supporters, including funders and national and state education policy leaders. The panels reached consensus on three major outcomes for youth participating in afterschool STEM programs. They concluded that afterschool STEM programs help youth to:

- Develop interest in STEM and STEM learning activities;
- Develop capacities to productively engage in STEM learning activities; and
- Come to value the goals of STEM and STEM learning activities.

The panelists also reached consensus on the indicators of progress toward these outcomes (such as awareness of STEM professions and the ability to exercise STEM-relevant life and career skills), as well as sub-indicators that represent measureable dimensions of the indicators (such as demonstrating an understanding the variety of STEM careers and demonstrating an ability to work in teams or demonstrate problem-solving abilities). However, they expressed varying degrees of confidence in afterschool's ability to demonstrate its impact.

For example, the study shows that the field is less confident about affecting in-school STEM outcomes than it is about improving skills such as problem-solving and teamwork. However, in a recommendation to policymakers, the report emphasizes that these skills are as important as academic outcomes in terms of broadening access and participation and maintaining an interest in STEM fields and careers. Accordingly, it is vital for STEM education policies to reflect this understanding.

“We know that effective afterschool programs can impact STEM learning for students,” said Linda P. Rosen, CEO of Change the Equation, a nonprofit coalition of CEOs that promotes improvement in STEM education. “The outcomes highlighted in this report give us a deeper look at what works and bring greater clarity to what leaders in the afterschool field view as their role. Armed with this tool, funders, including the corporate community, can better understand program leaders and make wise decisions about how they invest their philanthropy dollars in afterschool programs.”

Because afterschool programs are highly distinct from one another, serving students of different ages, relying on different localized resources and pursuing different types of learning goals, the study notes that the outcomes and indicators do not represent mandatory goals for all afterschool STEM programs. Rather, they are intended to help programs define their goals, describe their impact and establish their niche in STEM education.

The study, funded by the S.D. Bechtel, Jr. Foundation and the Noyce Foundation, was released at the monthly STEM Salon hosted by Change the Equation.

The study team was led by Krishnamurthi and included Bronwyn Bevan, associate director of program, Exploratorium; Vicky Ragan Coulon, director, Evaluation & Research Associates; and Jen Rinehart, vice president for research and policy, Afterschool Alliance.

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The Afterschool Alliance is a nonprofit public awareness and advocacy organization working to ensure that all children and youth have access to quality afterschool programs. More information is available at www.afterschoolalliance.org.