



Summit on Expanding STEM Education Experiences

Tuesday, June 19, 2018

Executive Summary

Overview

The Urban Libraries Council (ULC), with support from the Exelon Foundation, convened a summit of local government, library and school officials from Montgomery County, Prince George's County and Washington, D.C., on June 19, to explore opportunities to enhance the STEM experiences available to low-income children and families in the region. The summit was built around four assumptions:

1. STEM education is important to individual achievement and community economic health.
2. Children in low-income neighborhoods have less access to STEM learning opportunities than more affluent children.
3. When elected, school and library leaders work together, children and their families benefit.
4. Collaboration within and across jurisdictions will help build and sustain broader STEM ecosystems.

Outcomes for the summit were:

- Increased awareness of the value of STEM learning and the challenges low-income children and their families encounter in accessing STEM opportunities.
- Leadership insights about needs, opportunities and challenges to guide continuing work in the three local governments.
- Preliminary plans for continued collaborative work among the participating local government, school and library officials to broaden the commitment to STEM education and strengthen the local STEM ecosystems.

To set the stage for the conversation, these three local government leaders provided brief perspectives on the importance of STEM education and the opportunities for improved collaboration within and across the jurisdictions:

- Isiah Leggett, County Executive, Montgomery County, MD
- Ahnna Smith, Interim Deputy Mayor for Education, Washington, DC
- Cheryl Landis, Education Coordinator, Office of the County Executive, Prince George's County, MD

Key Themes

The following themes emerged from the leader presentations and discussion among the participants.

- Motivation, curiosity, equitable access, quality content and collaboration among key players are vital components of providing successful STEM education experiences for children and youth.

- The United States lags behind other advanced countries in graduating science majors which is due, in part, to not getting students interested in and excited about STEM subjects in elementary and middle school.
- Parents need to understand what STEM learning is, how it can contribute to longer-term success and where to find STEM opportunities that supplement or expand traditional classroom learning. Increasing understanding includes making the idea of STEM learning less intimidating and more welcoming to children and families, particularly those from lower-income neighborhoods.
- STEM learning covers a wide range of topics (the “what”) and problem-solving skills (the “how”). Building successful partnerships to expand STEM education experiences begins with agreeing on a common language about the focus and scope of STEM learning.
- With daily classroom schedules filled by required subjects, STEM learning often occurs during out-of-school time making it particularly important to ensure that parents and children from lower-income neighborhoods know how to find and participate in STEM opportunities.
- Lack of communication, awareness and shared understanding among community STEM providers makes it difficult to align programs and minimize duplication and may lead to community confusion about opportunities and choices.
- Transportation to STEM programs and activities is a significant obstacle for many children and families which inhibits participation even when they know about and are motivated to get involved in STEM learning.
- Libraries are critical resources in the STEM ecosystem because they are uniquely able to (1) encourage and nurture curiosity among children; (2) ignite the joy, passion and wonder that provides a foundation for STEM learning; and (3) reach children where they are – in parks and playgrounds, recreation centers, daycare facilities, community centers and other gathering places – to overcome the transportation barrier.
- Library success as a resource for high-quality STEM learning requires the right complement of staff who have some expertise in STEM areas and are not afraid to take on new challenges.
- Connecting the dots among STEM providers – particularly libraries and schools – will help move the dial on STEM programming to produce a collective impact that benefits all children.

Next Steps

ULC will build upon the lessons learned from the Summit in a new project, Partners for Middle School STEM funded by the Institute of Museum and Library Services (IMLS). The project is intended to catalyze the adoption of multi-sector partnerships and the development of pilot STEM programs led by public libraries to reach low-income middle schools youth.

List of Participants

Montgomery County, MD

Elizabeth Bell, Information Technology and Computer Science Instruction Specialist, Montgomery County Public Schools

Carly Beveridge, Head of Children's Services, Gaithersburg Branch, Montgomery County Public Libraries

Claire Cocciole, Director of Maker and Community Partnerships, KID Museum

Christine Freeman, Early Literacy and Children's Services Manager, Montgomery County Public Libraries

Mary Ellen Icaza, Assistant Director, Programs and Outreach, Montgomery County Public Libraries

Isiah Leggett, County Executive

Cara Lesser, Founder and Executive Director, KID Museum

Lauren Martino, Head of Children's Services, Silver Spring Branch, Montgomery County Public Libraries

Susan Phillips, Science, Technology and Engineering Coordinator, Montgomery County Public Schools

Anita Vassallo, Acting Director, Montgomery County Public Libraries

Prince George's County

Lorrie Ann Armfield, Science Instructional Specialist, Department of Curriculum and Instruction

Linda Armwood, Howard B. Owens Science Center

Stephen Biller, Howard B. Owens Science Center

Virginia Fulton, Outreach Teacher, Howard B. Owens Science Center

Michelle Hamiel, Interim Co-Chief Executive Officer, Prince George's County Memorial Library System

Maddie Hines, Digital Services Manager, Prince George's County Memorial Library System

Kelsey Hughes, Adult and Teen Services Specialist, Prince George's County Memorial Library System

Cheryl Summers Landis, Education Coordinator, Office of County Executive Rushern Baker

Jessica Leedy, Outreach Teacher, Howard B. Owens Science Center

Rachel Zukowski, Program Services Manager, Prince George's County Memorial Library System

District of Columbia

Richard Reyes-Gavilan, Executive Director, District of Columbia Public Library

Ellen Riordan, Assistant Director of Programs and Partnership, District of Columbia Public Library

Ahnna Smith, Interim Deputy Mayor for Education, Washington, DC

Melissa Varner, Teen Programs and Partnerships Coordinator, District of Columbia Public Library

Urban Libraries Council

Susan Benton, President and CEO

Christine Becker, Senior Consultant

Jennifer Blenkle, Director of Strategic Initiatives

Ximena Diaz, Program Intern

Matthew Wims, Project Coordinator