

"I HAD TO CHANGE TO SEE YOU": REFLECTIONS ON RESEARCH WITH BLACK FAMILIES

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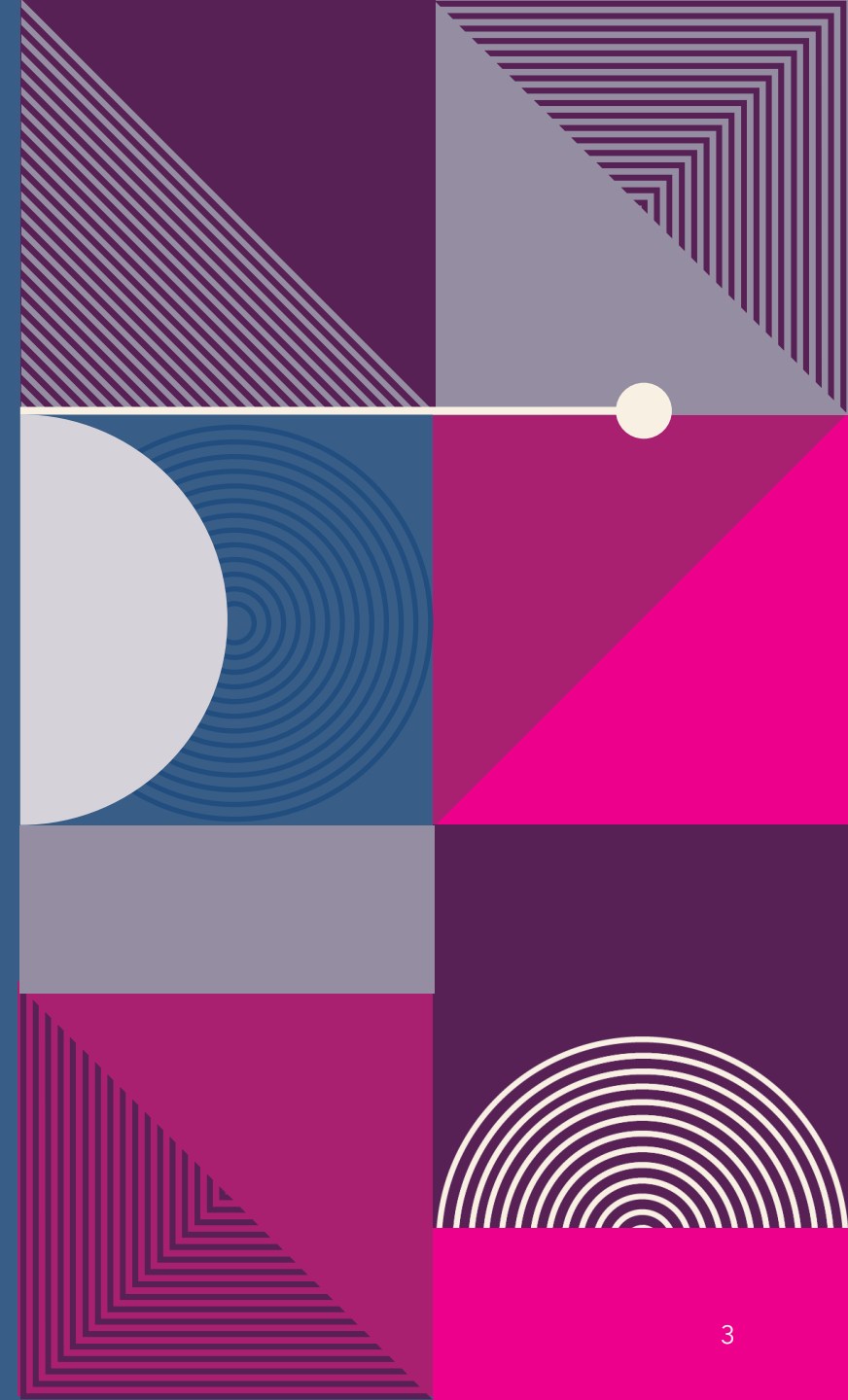
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ICEBREAKER

WHAT'S BEEN YOUR BIGGEST SHIFT IN FAMILY-ENGAGED WORK SINCE THE PANDEMIC?





REFLECTIONS ON WHAT HAS NOT CHANGED

WE KNOW THAT....



Black communities are rich with innovative engineering and design histories, practices, and experiences (Fouché, 2003, 2005; Sluby, 2004).

WE KNOW THAT....

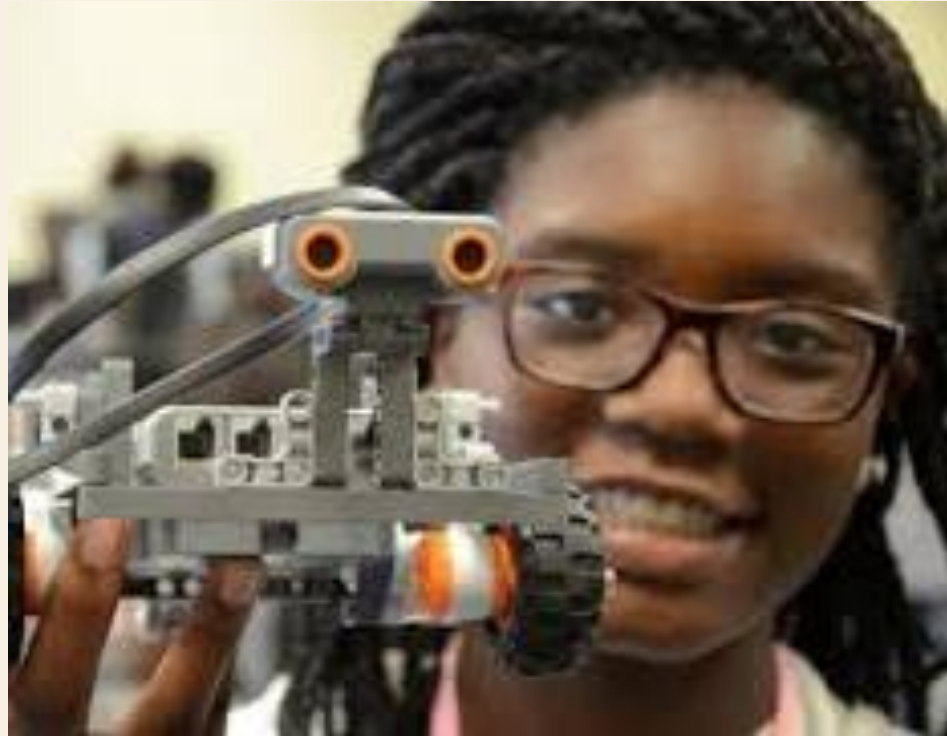
Children's learning and development are greatly influenced by their interactions with family members, especially in activities that involve hands-on experiences (Crowley et al., 2001).



WE HAVE SEEN HOW...

Guardians provide their children with many resources and opportunities to engage with invention, design, and STEM concepts.

“[Lauren’s] not afraid of Information Technology and Computers. She’s installing software on her laptop. She’s had a laptop since she was four; like a real laptop not like a Barbie one like a real laptop. You know what I mean? So she has a very high aptitude of using technology.” - Mom



Black Families develop and sustain engineering interest by...

FOSTERING CURIOSITY

providing resources

CONNECTING TO THE ENGINEERING COMMUNITY

PROMOTING COLLABORATION

cultivating problem-solving skills

ENCOURAGING HANDS-ON EXPERIENCES

Encouraging strong educational values

OFFERING EMOTIONAL AND ACADEMIC SUPPORT

creating a supportive home environment

Sharing STEM knowledge

Making connections between different contexts

(TOLBERT SMITH ET AL., 2022)

Black Families Incubate Engineering Success

BLACK FAMILIES ARE
● CRITICAL SOURCES OF
FAMILIAL CAPITAL AND
ENGINEERING LEARNING
PARTNERS FOR THEIR
CHILDREN (TOLBERT SMITH
ET AL., 2022).

AFRICAN AMERICAN
● PARENTS ACTIVELY
ADVOCATE FOR THEIR
CHILDREN'S EDUCATION
AND CONTRIBUTE TO
FOSTERING THEIR INTEREST
AND SUCCESS IN STEM
FIELDS

● GUARDIANS SERVE AS
MENTORS, FIRST TEACHERS,
SUPPORTERS, NAVIGATORS,
AND IDENTIFY
EXTRACURRICULAR
ACTIVITIES THAT PROMOTE
STEM LEARNING (EBONY
MCGEE & MARGARET BEALE
SPENCER, 2015; HUGULEY ET
AL., 2020).

PROJECT OVERVIEW





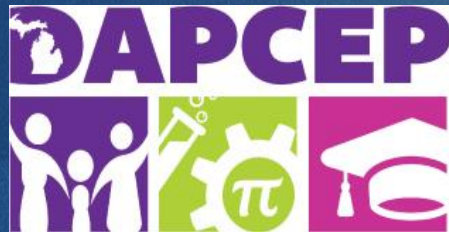
**NSF CAREER:
Investigating Black
Youths'
Engineering,
Innovation, and
Design Practices at
the Intersection of
Museum and
Home/Family
Learning**



- Collaborate with Henry Ford Museum and the Detroit-Area Pre-College Engineering Program (DAPCEP),
- To engage Black youth and families of color in informal science education programming, with culturally relevant contextual frameworks, to broaden their participation in STEM and enhance further STEM career aspirations.

families engaged through
afterschool STEM nights

Community Engaged Scholarship



families engaged
through structured
Museum visits

Community Organizations and Museums

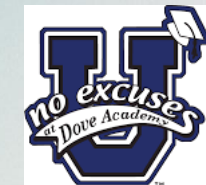
Logistics and Administration



families engaged through
self-guided Museum visits +
podcasting

Families as Partners


From participants to partners



DOVE ACADEMY
OF DETROIT



FACING CHALLENGES AND REFLECTION

- Early methods (DAPCEP Invention Convention course 6-week course, formal interviews)
 - Share what didn't go as planned: low turnout, hesitancy, family members not participating, resistance to interviews
 - Reflection on initial assumptions: What was I expecting? What did families want?
 - Listen to families and experienced researchers
 - Recognize families' desires: celebration, learning from their children, storytelling—not just answering research questions
- 

PAUSE: INDIVIDUAL REFLECTION

Think about a time when your program did not launch well. Share what you learned and how you pivoted.



FAMILY ENGAGEMENT PIVOT



PIVOT STRATEGIES



Curate Family Experiences

Podcasting vs Interviews

Targeted Facebook Advertisement

Museum Scavenger Hunt for Artifacts

Provide each family with low-fidelity prototyping materials

Family Design Challenge

Brand Dr. Dele and Research Lab (gain trust)

Partner with my Partners

PODCAST SNIPPET



FOR DISCUSSION



Have you ever experienced similar challenges—what solutions or surprises have you found?



What do these podcast clips spark for you—any resonance or surprises?



Based on what we've discussed, what does the future of family-engaged research and programming look like? What are the opportunities or innovations on your horizon? What hasn't worked?



What Recommendations would you make for researchers and practitioners engaging families in STEM/engineering learning in informal environments?



Thank you!

To AISL Awardee Conference planners and session attendees

To the Leverage lab graduate students Emmanuella Ejichukwu, Hanadi Matar, and undergraduate student Boluwatife Kolawole, along with every student who has contributed to this research.

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