Welcome!

Photo credit: Kapor Center for Social Impact

- Please introduce yourself, organization, and Collaborative in the chat box.
- What does ‘intersectionality’ mean to you?

February 13, 2019

NATIONAL GIRLS COLLABORATIVE PROJECT

Agenda

- Addressing the Double-Bind: Improving Outcomes for Girls of Color in STEM and Computing
- Facilitated Discussion
- Successes and Challenges
- Closing

Photo credit: Kapor Center for Social Impact

Dr. Allison Scott

Chief Research Officer,

Kapor Center for Social Impact

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

Addressing the Double-Bind:

Improving Outcomes for Girls of Color in STEM & Computing

Allison Scott, Ph.D.

National Girls Collaborative Project

February 13, 2019

Kapor CAPITAL

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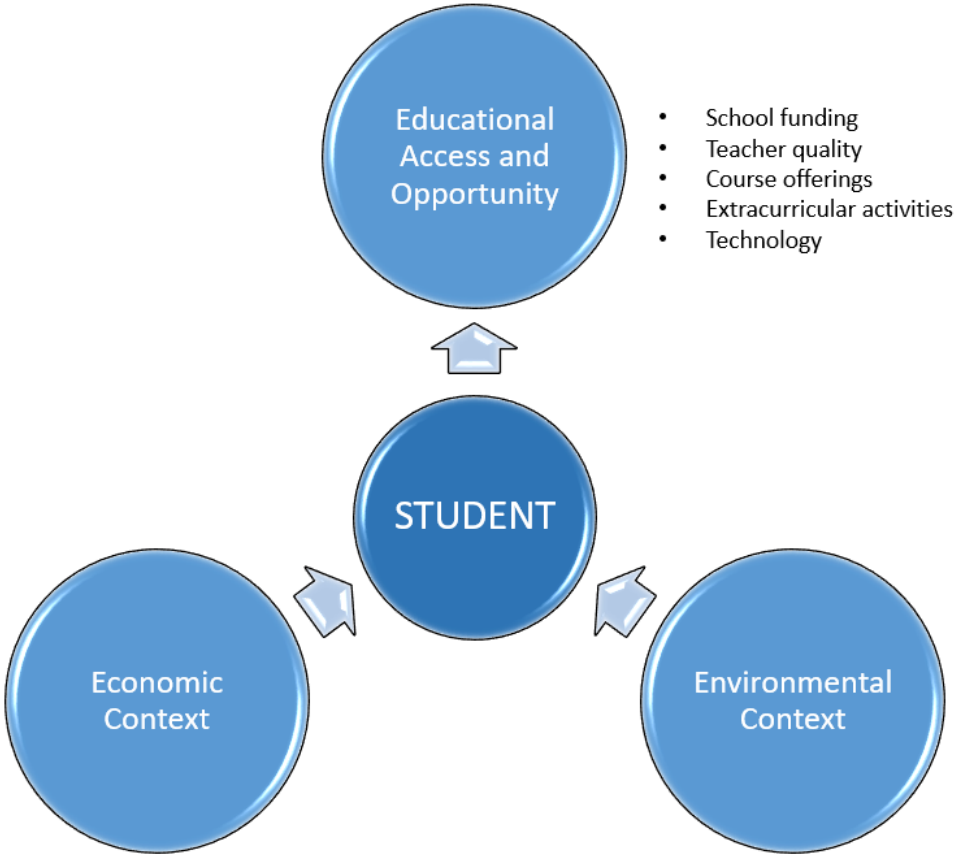
- **Women of Color**: The term “women of color” requires careful definition and contextualization for proper use, both in terms of who is included in the definition and why the term is needed to distinguish women of color as a particular subset of the population. The categories of “women” and “people of color” are numerically marginalized gender and racial/ethnic groups in computing (and oftentimes face social disparities and inequity in broader American society). Intersectionality theory describes women of color as experiencing both intersecting identities which exist within structures of power and privilege to compound marginalization by both race/ethnicity and gender. To specifically examine this category, a broad definition is used to define “women of color” as individuals at least partially identifying as women AND identifying as a member of a racial/ethnic group other than white (specifically, Black/African-American, Latinx/Hispanic, Asian, Native American/Alaskan Native, and Native Hawaiian/Pacific Islander). This category is extremely broad, and experiences of women of color can be vastly different based on context and additional intersectional identities including, socioeconomic status, physical ability, sexual orientation, age, religion, immigration status, schooling background, parenting/caregiving status, linguistic background, nation of origin, etc. Where possible, this project will examine and identify experiences of women of color based on intersections with other identities. This project focuses on women of color within the social, cultural, and historical context of the United States, while understanding significant differences exist in definitions, histories, and experiences of women of color across the globe.
- **Underrepresented Women of Color:** Underrepresented women of color are distinguished in this project as women from racial/ ethnic groups who are traditionally underrepresented in computing education, degree completion, the tech workforce, and entrepreneurship/VC, in comparison to their representation in the U.S. population and representation among potential pools of candidates (e.g., the total labor force, CS degree-earners). Underrepresentation varies across computing contexts and it is necessary to specify the domain in which underrepresentation is present when categorizing underrepresented women of color. Specifically, Black, Latinx, American Indian/Alaskan Native women are underrepresented across the pipeline, in participation in computing education, completion of computing degrees, participation in entrepreneurship and venture capital, and Asian women as a whole are overrepresented in K-12 computing education and within the tech workforce, but underrepresented in leadership positions within the technology workforce.
- **Gender:** Understanding that gender is a socially constructed identity and that there is great diversity within gender identity and expression, this project focuses on individuals who at least partially identify with an identity of “female,” “woman,” “girl,” “feminine,” “womxn” or similar descriptors and identities. Additionally, we intentionally include transgender women, and non-binary individuals within the gender group of focus in this project, as we are most interested in the non-majority gender group within computing. Within a broader focus on intersectionality, we will aim to identify trends and experiences at the intersection of gender identity and racial identity within computing and acknowledge the diversity of gender identities within the scope of work focused on women and girls of color.



Economic, educational, and social policies and practices have created systems of inequality.

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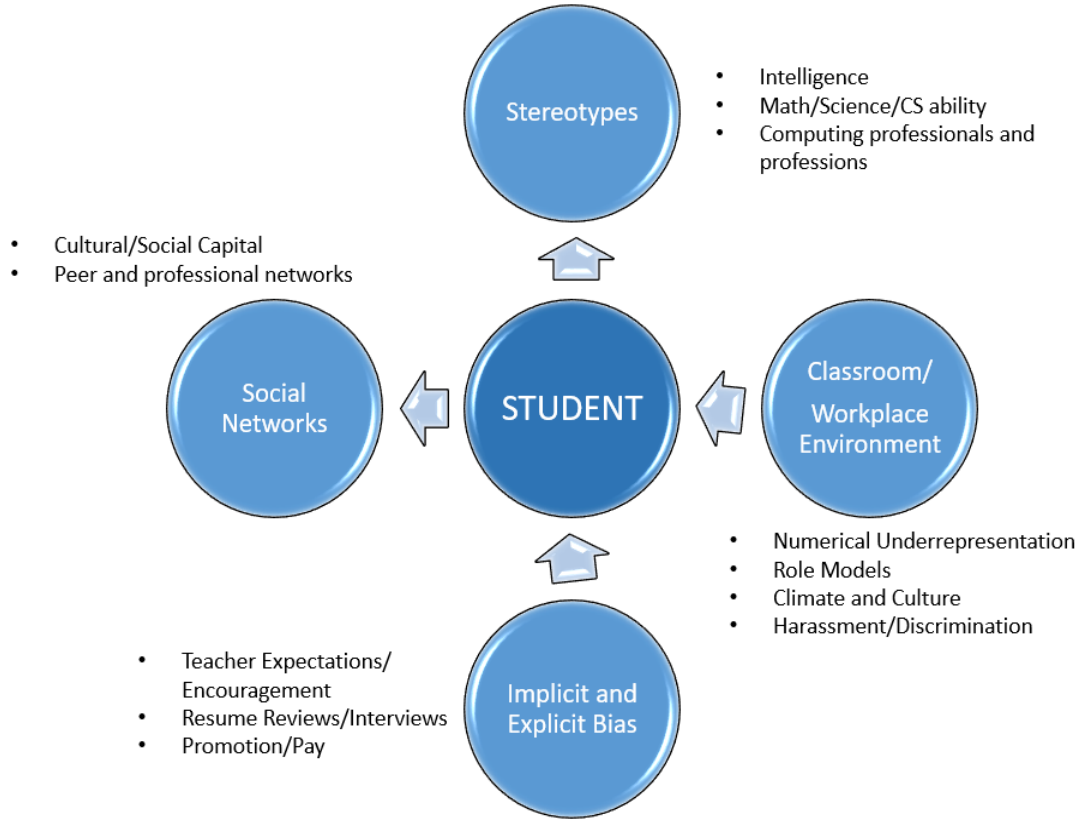

Stereotypes, biases, and environments of exclusion affect implicit and explicit practices of gatekeepers and impact individual responses to unfairness.

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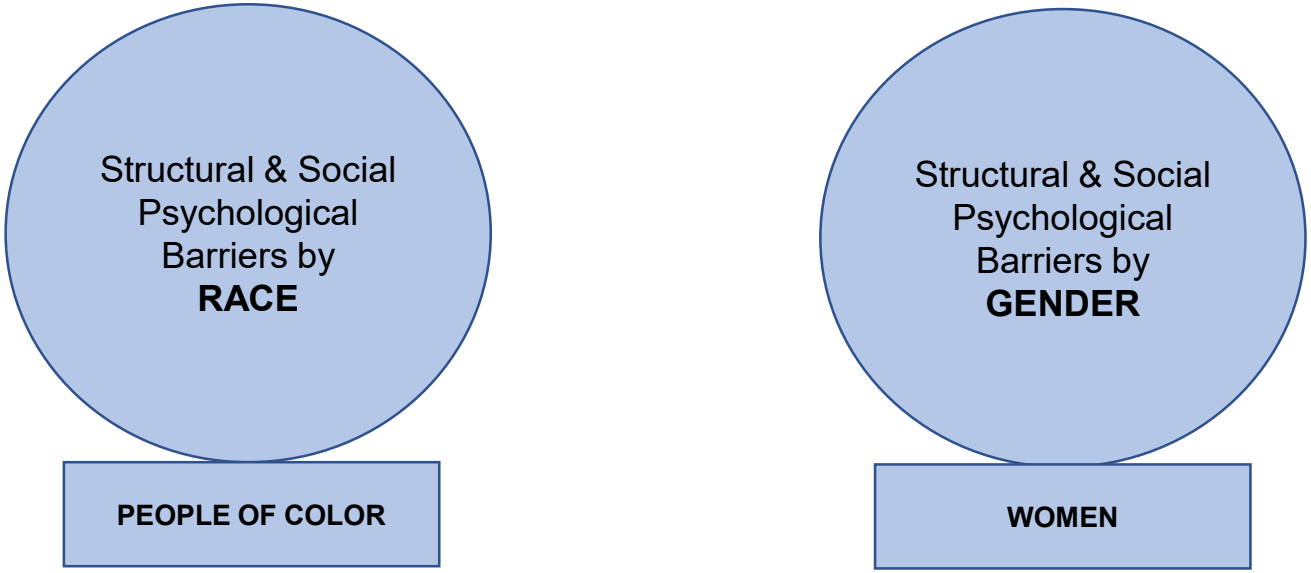

The intersection of racism and sexism affects women of color in ways that cannot be fully captured by examining race or gender separately, making the experiences of women of color in the computing and tech ecosystem qualitatively different from white women and men of color.

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"Without frames that are capacious enough to address all the ways that disadvantages and burdens play out for all members of a particular group, the efforts to mobilize resources to address a social problem will be partial and exclusionary." – Kimberle Crenshaw

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Dr. Shirley Malcom

Women and people of color are underrepresented and marginalized in STEM fields.

The **“double-bind”** describes the unique and cumulative challenges of racism and sexism experienced by women of color in STEM fields.

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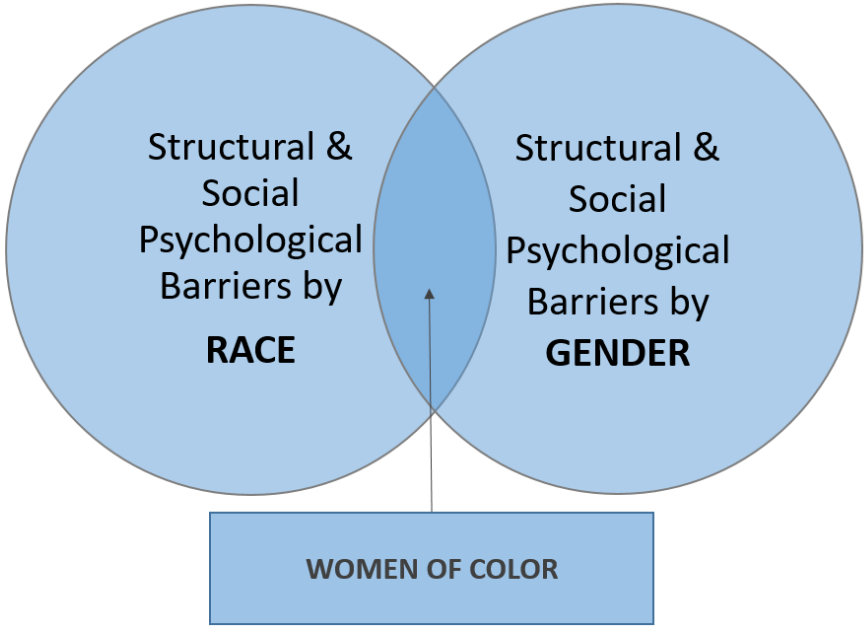
Intersectionality and the "Double-Bind"



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SMASH

- **8** sites across five states: (UC Berkeley, Stanford, UC Davis, UCLA, Morehouse, Wharton, Wayne State, Illinois Institute of Technology)

- **5** week, **3** summer residential program + alumni programming

- **95%** underrepresented students of color, **51%** female, **72%** FRPL-eligible, **73%** First-Gen College

- Over **1,000** current students and alumni

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1

Girls of color anticipate **facing greater barriers** in pursuing STEM studies than their male counterparts…which negatively affects their interest and aspirations to major in STEM.

Citation: Scott & Martin (2014)

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2

A CS intervention --consisting of a 3-year course sequence, culturally relevant curriculum and pedagogy, exposure to diverse role models, peers and instructors, and leadership development activities--significantly and positively increased the interest, attitudes, and aspirations of girls of color in computing.

Citation: Scott et al., (2017)

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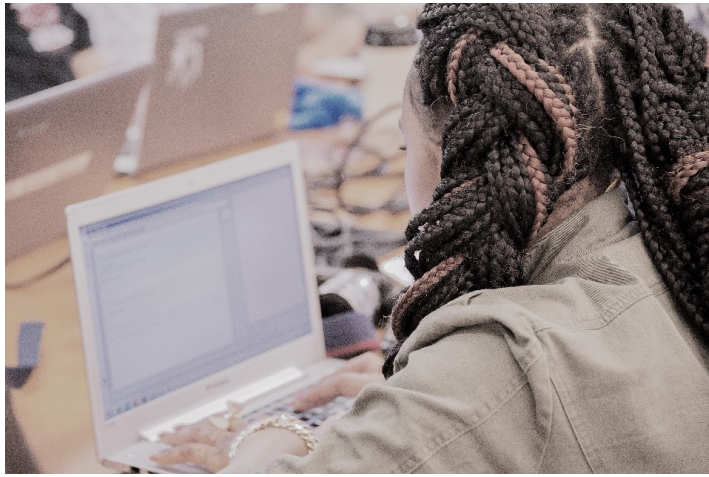

3

Yet, despite the rigorous multi-year CS intervention (and equal levels of content knowledge and ability), girls of color remain less likely to pursue CS majors than their male peers.

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We spent a year experimenting with the approach of the program, intentionally aiming to close the gender gap in CS.

- Piloting single-gender classrooms
- Messaging affirmations of belonging
- Increasing diversity in instructors

In 2018, the gender gap in SMASH CS was eliminated!

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1. **Pedagogy**: Effective teaching practices and approaches that address implicit bias, set high expectations, and deliver engaging instruction
2. **Curriculum:** Engaging, project-based, and culturally relevant curriculum which aligns content to non-CS/STEM interests and identities AND is rigorous
3. **Role Models:** Providing girls with access to instructors, mentors, industry professionals to identify with and aspire to
4. **Collaboration and Peer Learning:** Within-network effects were powerful and girls often felt increased support and confidence when in single-gender contexts
5. **Youth Development**: Supporting girls' identity development, growth-mindset, confidence building, stereotype reduction, leadership development, and agency

*tailored to environment, context, culture of the youth being served.

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Addressing Intersectionality:

Program Design, Development & Implementation

- Which specific barriers are you addressing?
- Are you being explicit and intentional about addressing intersectional barriers?
- How are you measuring the effectiveness of your strategies (are they working?)

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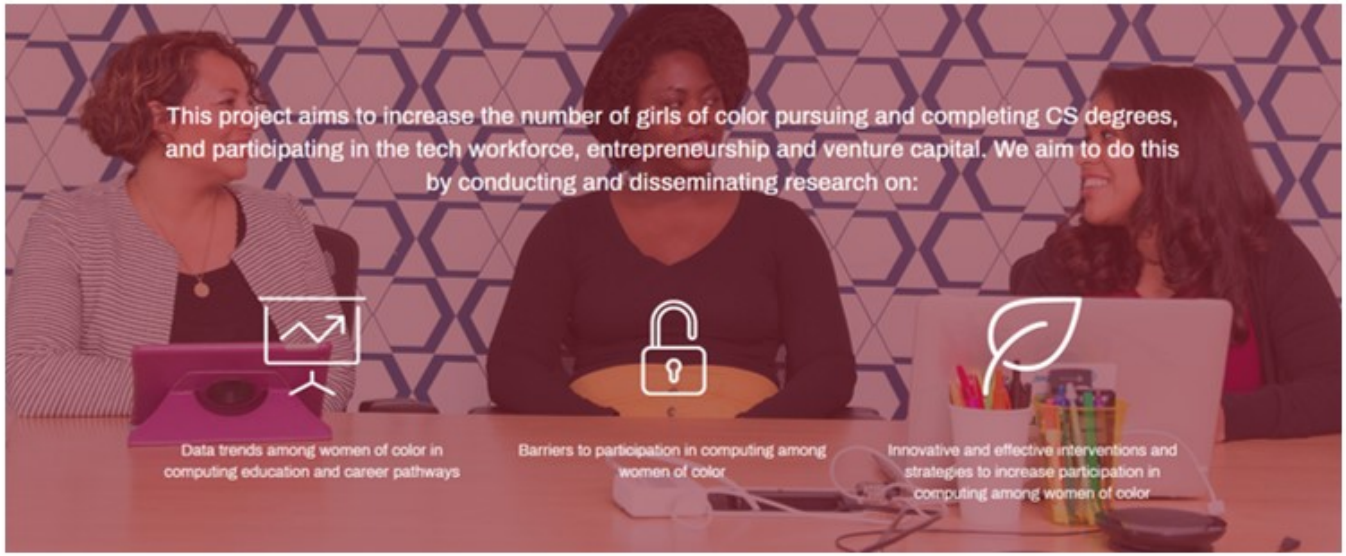
Women of Color in Computing: Researcher-Practitioner Collaborative



AIM: To build a body of literature on women of color in computing and develop, test, and scale strategies for improving outcomes for women of color across the tech ecosystem.

www.wocincomputing.org

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Priority Research Areas:

- **Entry, Persistence, and Advancement in Computing in Higher Education**
- **Participation of WOC across the Technology Workforce**
- **Women of Color in Entrepreneurship and Venture Capital**

Research Projects:

- **13 current projects underway**
- **Research findings to be disseminated in 2019**
- **Media/social media representation of WOC in computing**

www.wocincomputing.org

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Thank you!

Please keep in touch and let's collaborate!

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For more information about research and programs check out:

kaporcenter.org & smash.org

For more information about the Women of Color in Computing Collaborative, check out:

wocincomputing.org

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Successes? Challenges?

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General NGCP Updates

- Paramount Pictures' WONDERPARK
- March is National Women's History Month, stay tuned for NGCP highlights!

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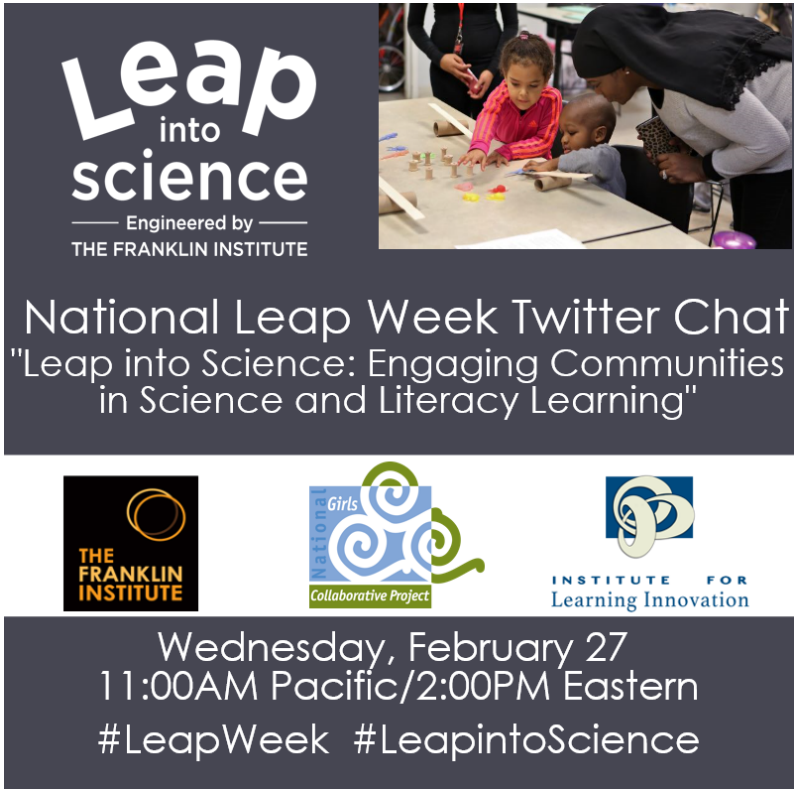
General NGCP Updates Continued

- Twitter Chat: “Leap into Science: Engaging Communities in Science and Literacy Learning” on February 27 at 11:00AM PST/2:00PM EST using #LeapWeek
- The Connectory promotion



Next Collaborative Leadership Teams Meeting: March 13, 2019

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