INTERSECTIONALITY IN TECH 101

Intersectionality

is a critical and necessary concept to understand when developing effective programs to broaden the participation of women and girls in computing. This resource provides a background and overview of the concept, in addition to key readings and resources related to Black, Indigenous, and People of Color (BIPOC)[1] who identify as women, girls, gender queer, and non-binary in STEM and computing.

[1] BIPOC is a term that has grown in popularity over the past decade. It is meant to ground the distinctive voices and experiences of minoritized groups and to be more inclusive of the diverse range of racial and ethnic populations in the United States. For more background on the origins of the acronym, take a look at The BIPOC project (thebipocproject.org).

Essential terms of
INTERSECTIONALITY

Standpoint Epistemology:

The idea that what you know and believe (epistemology) is guided by who you are and your life experiences (standpoint).

Matrix of Domination:

A concept developed by sociologist Patricia Hill Collins that underscores the idea that one's position in society is made up of multiple contiguous standpoints rather than just one singular standpoint or perspective.

Not all identities are perceived or treated equally within society. One's unique set of multiple identities can determine how much (or little) power one can possess and experience within societal structures or with other individuals.
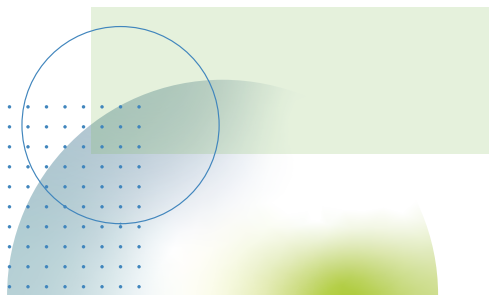

BIPOC Individuals:

Refers to self-identifying women, girls, gender queer, and non-binary individuals from racial and ethnic minority groups, including, but not limited to: Black/African-Americans, Hispanic/Latinx[2], Asian/Pacific Islanders, and Native Americans.

[2] Latinx is a gender-neutral term used to refer to a group of people or to a single person of Latin-American descent. For more information on this term, see Refinery29's Gender Nation Glossary (https://www.refinery29.com/en-us/lgbtq-definitions-gender-sexuality-terms).

What is Intersectionality?

Intersectionality is a **WAY OF THINKING** that takes into consideration the perspectives and experiences of individuals from historically excluded groups.

An intersectional approach recognizes that one's social location--oftentimes shaped by race, class, gender and other dimensions of who we are--creates multiple, **INTERCONNECTED IDENTITIES AND DISTINCT EXPERIENCES**.

Employing an Intersectional framework acknowledges that there are social systems in place that create **BARRIERS AND CHALLENGES FOR SOME** individuals, while simultaneously providing **PRIVILEGE AND POWER FOR OTHERS**.

While the idea originated from the scholarship of black women, an intersectional lens is an important tool in **ADVANCING SOCIAL JUSTICE** for all groups in today's society.

A brief timeline of intersectionality

Mid-late 1800's

During the first wave of feminism, the discourse and writings of black scholars including Sojourner Truth, Anna Julia Cooper, and Maria Stewart call attention to the experiences of black women that were shaped by race, class, and gender and were often different from middle-class white women's experiences.

1970's-1980's

The scholarship and activism of black women and other women of color (bell hooks, Combahee River Collective, Gloria Anzaldua, and Patricia Hill Collins, for example) start to proliferate academic and community spaces. Their work engages important discussions around privilege, oppression, and identity politics both within and beyond their communities.

1989

Legal scholar Kimberle Crenshaw introduces the term intersectionality, advocating for a multidimensional approach to understand black women's experiences over a "single-axis analysis."[3]

2000's

An intersectional approach becomes an important component of the landscape of diversity, equity and inclusion. Age, color, sexual orientation, religion, ethnicity, and other layers of identity are also examined in addition to race, class, and gender identities.

2020

The tragic deaths of Ahmaud Arbery, Breonna Taylor, and George Floyd usher in a global movement against anti-black racism and for social justice. At the core of that movement is a call to action for racial justice, and a renewed focus on how racism intersects with other forms of oppression, such as sexism, homophobia, transphobia, ableism, and classism.

[3] Crenshaw, Kimberle (1989). "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics," University of Chicago Legal Forum: Vol. 1989: Iss. 1, Article 8.

Why an intersectional lens matters in tech

BIPOC individuals are regular and avid users of technology, but they lag behind in representation in computing education and in the technical workforce.

BIPOC INDIVIDUALS FACE ADDITIONAL BARRIERS related to their participation and engagement in computing and technology within K-12 and in higher education.

WOMEN ONLY REPRESENTED 27% OF THE COMPUTING WORKFORCE IN 2022, and BIPOC women made up a much smaller proportion of the computing field:

- **ASIAN WOMEN** represented just 7% of the computing workforce;
- **BLACK WOMEN** represented a mere 3% of the computing profession;
- **HISPANIC WOMEN** accounted for just 2% of the computing workforce.

Achieving equity in the tech industry must be approached intersectionally: race, class, gender, sexuality, and other key factors of identity shape experiences differently; and understanding those differences is critical to promoting diversity, inclusion and change for individuals who have been historically excluded from computing education and careers.

A Bibliography of Key Readings

For a deeper exploration into the core ideas and components of intersectionality, and to learn more about the experiences of BIPOC individuals in STEM and computing, we recommend the following readings and resources:

1. **Advancing Antiracism, Diversity, Equity, and Inclusion in STEMM Organizations: Beyond Broadening Participation.** National Academies of Sciences, Engineering, and MedicineWashington, DC: The National Academies Press. (2023).

2. **A Model of Queer STEM Identity in the Workplace** (Academic Paper). Allison Mattheis, Daniel Cruz-Ramírez De Arellano & Jeremy B. Yoder Journal of Homosexuality, 67:13, 1839-1863. (2020).

3. **Applying a Transformative Justice Approach to Encourage the Participation of Black and Latina Girls in Computing.** (Academic paper). Sheena Erete, Karla Thomas, Denise Nacu, Jessa Dickinson, Naomi Thompson, and Nichole Pinkard. 2021. ACM Trans. Comput. Educ. 21, 4. (2021).

4. **Culturally Responsive-Sustaining Computer Science Education: A FRAMEWORK** The Kapor Center for Social Impact (2022)

5. **Counterspaces for women of color in STEM higher education: Marginal and central spaces for persistence and success.** (Academic paper) Maria Ong, Janet M. Smith, and Lily T. Ko (2018). Journal of Research in Science Teaching, 55: 206–245.

6. **If Not Now, When? The Promise of STEM Intersectionality in the Twenty-First Century** (Essay) Kelly Mack, Orlando Taylor, Nancy Cantor and Patrice McDermott (2014). Peer Review, 16, 2.

7. **'Intersectionality' has become a hot-button topic in recent years. Here's what it means** (Blogpost) by Leah Asmelash (2023).

8. **Intersectionality in the narratives of black women in computing through the education and workforce pipeline** (Academic paper) Ryoko Yamaguchi, Jamika D. Burge Journal for Multicultural Education (2019)

9. **Navigating the Intersectionality of Race/Ethnicity, Culture, and Gender Identity as an Aspiring Latina STEM Student** (academic paper). David M. Sparks, Steve Daniel Przymus, Allison Silveus, Yohanis De La Fuente & Cassandra Cartmill (2021) Journal of Latinos and Education (2021).

10. **Queering STEM Culture in US Higher Education: Navigating Experiences of Exclusion in the Academy.** Edited By Kelly J. Cross, Stephanie Farrell, Bryce Hughes (2022). United Kingdom: Taylor & Francis.

11. **The Intersectionality Wars** (Blogpost) by Joan Coaston (2019)

12. **The Leaky Tech Pipeline: A Comprehensive Framework for Understanding and Addressing the Lack of Diversity Across the Tech Ecosystem** (report). Allison Scott, Freada Kapor Klein, Frieda McAlear, Alexis Martin and Sonia Kashy (2018). The Kapor Center for Social Impact.

13. **The Urgency of Intersectionality** (Ted Talk by Kimberle Crenshaw)

14. **Transforming Trajectories for Women of Color in Tech.** National Academies of Sciences, Engineering, and Medicine. Washington, DC: The National Academies Press. (2022)

15. **True Diversity is Intersectional.** (Blogpost) by Ellen K. Pao (2016).

16. **Unapologetically Dope: Lessons for Black Women and Girls on Surviving and Thriving in the Tech Field.** (Autobiography) A. Nicki Washington (2018).

Related NCWIT resources on intersectionality

Learning About Intersectionality: Videos That Spark Conversations
ncwit.org/resource/intersectionality-videos/

Technolochicas: A Critical Intersectional Approach Shaping the Color of Our Future
cacm.acm.org/magazines/2020/8/246359-technolochicas/abstract

Elevating Modern Figures: Dr. Jeremy Waisome and Dr. Kyla McMullen
ncwit.org/video/elevating-modern-figures-dr-jeremy-waisome-and-dr-kyla-mcmullen/

An NCWIT Community Call to Action for Racial Justice
ncwit.org/blog/an-ncwit-community-call-to-action-for-racial-justice/

An NCWIT Community Call to Action on Racial Justice: January 2021 Update
ncwit.org/blog/an-ncwit-community-call-to-action-on-racial-justice-january-2021-update/

Interrupting Bias and Creating Inclusive Culture
ncwit.org/video/interrupting-bias-and-creating-inclusive-culture/

The Importance of Multiple Approaches to Intersectionality
https://ncwit.org/blog/the-importance-of-complexity-in-attending-to-intersectionality/

Accelerating Racial Equity Progress: Jonah Edelman
ncwit.org/video/accelerating-racial-equity-progress-jonah-edelman/

Intersectionality: How Do We Address Multiple Identities and Biases at Once
ncwit.org/resource/2017-ncwit-summit-intersectionality-how-can-we-address-multiple-identities-and-biases-at-once-wa-ea-workshop-by-catherine-ashcraft-and-brenda-j-allen/

Colorism Bias in the Tech Industry
https://ncwit.org/resource/colorism/