

SAKI L. MILTON, M.B.A.

Ph.D. Candidate

Department of Teaching and Learning, Southern Methodist University

✉ smlilton@smu.edu ☎ 469.260.9806 🌐 www.sakimilton.com 📺 @sakimilton

EDUCATION

Southern Methodist University, Dallas, TX

Ph.D. in Teaching and Learning with an emphasis in STEM Education (August 2021 – present, expected defense January 2026)

Advisor: Candace Walkington, Ph.D.

Southern Methodist University, Dallas, TX

Master of Business Administration in Marketing (December 2005)

University of Texas at Austin, Austin, TX

Bachelor of Arts in Mathematics (August 2005)

RESEARCH INTERESTS

- Research practice partnerships for community-based STEM organizations
- Racially and ethnically minoritized girls' attitudinal and academic outcomes of informal mathematics learning
- Informal STEM Learning Ecosystems

RESEARCH EXPERIENCE

Seeing the World through a Mathematical Lens: A Place-Based Mobile App for Creating Math Walks

- Principal Investigator – Candace Walkington, Ph.D.
- National Science Foundation Funded Project, DRL 2115393
- Role: Graduate Research Assistant – Prepare IRB protocols and university permissions for summer camp data collection, recruit camp participants for study, communicate with parents for consent, conduct on-site video data collection, manage data storage, coordinate undergraduate research assistants' schedules and duties, prepare manuscripts for publication, data coding and analysis, submit publications and presentations, disseminate findings through conference presentations.

TEACHING EXPERIENCE

Higher Education

Southern Methodist University

EDU 6351: Community-Centered STEM Integration, Teaching Assistant, Spring 2024

EDU 6369: Culturally Responsive Teaching, Guest Lecturer, Spring 2024

K-12

Westlake Academy IB World Charter School, Westlake, TX

7th grade math, Algebra 1, Geometry (July 2009 – July 2011)

Algebra 1, Geometry, Technology (July 2014 – July 2016)

Emirates National School, Ras Al Khaimah, United Arab Emirates

7th grade math, 8th grade math (August 2016 – December 2016)

Bruns Academy, Charlotte, NC

7th grade math (August 2013 – June 2014)

St. Anthony Academy Charter School, Dallas, TX

7th and 8th grade gifted and talented (July 2008 – July 2009)

Dallas CAN Academy Charter School, Dallas, TX

Algebra 2 (February 2006 – July 2008)

OTHER WORK EXPERIENCE

The GEMS Camp™ (Girls interested in Engineering, Mathematics and Science), Dallas, TX

Founder and Executive Director (May 2010 – present)

Manage all nonprofit operations for a 501(c)3 organization that provides summer and school-year STEM programming for minoritized girls, including university relations and negotiations, grant-writing, fundraising, curriculum and program development, financial management, program evaluation, and staffing. Served 1,300 girls with 92% participant retention and 92% volunteer retention since 2015. Grant writing secured over \$1 million in private foundation funding since 2019.

SAVVAS Learning Company (formerly Pearson K12), Hoboken, NJ

Middle East Regional Manager (June 2019 – October 2020)

Oversaw the company's expansion strategy in the Middle East region from Dallas home office and was solely responsible for meeting both short and long-term sales, revenue, operations, and profitability targets by managing the ongoing day-to-day issues and the relationship with education partners and customers in the region.

Pearson K12, Dubai, United Arab Emirates

US Schools Portfolio & Curriculum Manager (December 2016 – December 2018)

Worked as an expatriate in the Middle East as an education specialist supporting American curriculum international schools for a global learning company with 30,000 employees. Supported regional account managers and distributors in Saudi Arabia and Gulf & Levant countries with U.S. product and curriculum expertise. Coordinated and delivered product training for Southeast Asia sales team of 15 agents.

Great Minds, Incorporated, Charlotte, NC

Secondary Mathematics Writer (March 2013 – June 2014)

Wrote and edited 6th, 7th, and 8th-grade lessons, rubrics, assessments, and homework guides, as well as facilitated bi-weekly online math webinars to 6th-grade teachers for the Eureka Math curricular materials aligned to Common Core State Standards adopted for New York State.

PRESENTATIONS, PUBLICATIONS, & PAPERS

Published Peer-Reviewed Publications:

Walkington, C., Pando, M., Lipsmeyer, L. L., Beauchamp, T., Sager, M., & **Milton, S.** (2025). Middle school girls using generative AI to engage in mathematical problem-posing. *Mathematical Thinking and Learning*, 1–22.

Sager, M. T., **Milton, S.**, & Walkington, C. (2025). Girls leading the conversation: harnessing the potential of podcasting for informal and project-based learning. *Discover Education*, 4(1), Article 18.

Milton, S., Sager, M.T., Sherard, M.K., Walkington, C., & Petrosino, A.J. (accepted). Students' attitudes towards mathematics during math walks. *Journal of Urban Mathematics Education*.

Sager, M.T., Sherard, M. K., Walkington, C., **Milton, S.**, & Petrosino, A.J. (2024). Seeing mathematics together: A comparative case study of youths and facilitators collaborating to learn mathematics in informal settings. *Journal of Mathematical Behavior*, 75, 101171.

Milton, S., Sager, M. T., & Walkington, C. (2023). Understanding racially and ethnically minoritized girls' perceptions of their STEM identities, abilities, and sense of belonging in a summer camp. *Education Sciences*, 13(12), 1183.

Sager, M.T., Sherard, M.K., **Milton, S.**, Walkington, C., & Petrosino, A. (2023). Rising in the ranks!: Learning math or playing games? *Frontiers in Education*, 8.

Under Review Publications:

Petrosino, A.J., Sager, M.T., Sherard, M.K., Washington, J., Milton, S., Walkington, C. (Under review). Bridging boundaries: Insights from a multi-stakeholder RPP for informal math education. Submission to *Mathematical Thinking and Learning*.

Refereed Conference Proceedings:

(* Indicates conference presentation)

Milton, S., Sager, M.T. & Walkington. (2025). *Incorporating Critical Data Literacy into a STEM Summer Camp. Proceedings of the 19th International Conference of the Learning Sciences – ICLS 2025*. Helsinki, Finland: International Society of the Learning Sciences.

Sayed, J., **Milton, S.**, Sager, M., & Walkington, C. (2024, November 7-10). It is art: Teacher scaffolding and student problem posing during math walks at an art museum. In Kosko, K. W., Caniglia, J., Courtney, S. A., Zolfaghari, M., & Morris, G. A., (Eds.). *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 2065-2074). Kent State University.

Walkington, C., **Milton, S.**, Pando, M., Lipsmeyer, L., Sager, M., & Beauchamp, T. (2024). Adolescents Using Generative AI to Engage in Mathematical Problem-Posing. To appear in *Proceedings of the 15th International Congress on Mathematical Education (ICME-15)*. Sydney, Australia.

Milton, S.*, Sager, M., & Walkington, C. (2024). Exploring STEM identity and belonging in minoritized girls at a summer camp. In Lindgren, R., Asino, T. I., Kyza, E. A., Looi, C. K., Keifert, D. T., & Suárez, E. (Eds.), *Proceedings of the 18th International Conference of the Learning Sciences - ICLS 2024* (pp. 1562-1565). Buffalo, USA: International Society of the Learning Sciences.

Sager, M., Sherard, M., **Milton, S.**, Walkington, C., & Petrosino, A. (2024). Learning math through a game-based personal excursion. In Lindgren, R., Asino, T. I., Kyza, E. A., Looi, C. K., Keifert, D. T., & Suárez, E. (Eds.), *Proceedings of the 18th International Conference of the Learning Sciences - ICLS 2024* (pp. 2085-2086). Buffalo, USA: International Society of the Learning Sciences.

Milton, S.*, Sager, M.T., Walkington, C., Petrosino, A.J., Sherard, M.K., Dhingra, K. (2023). Student's affective and physiological attitudes toward mathematics while participating in math walks. *Proceedings of the 17th International Conference of the Learning Sciences – ICLS 2023*. Montreal, Canada: International Society of the Learning Sciences.

Sager, M.T., Sherard, M.K., Walkington, C., Petrosino, A.J., **Milton, S.*** (2023). Examining mathematical questioning during math walks. *Proceedings of the 17th International Conference of the Learning Sciences – ICLS 2023*. Montreal, Canada: International Society of the Learning Sciences.

Walkington, C., Dhingra, K., Petrosino, A.J., **Milton, S.***, Sager, M.T. (2023, November). MathWalks - A place-based mobile app [Poster Presentation]. *CIRCLS '23 Convening*. Alexandria, Virginia, United States.

Walkington, C., **Milton, S.** *, Petrosino, A., Sager, M., & Dhingra, K. (2022). Student-created math walks in informal learning spaces. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.) *Proceedings of the 16th International Conference of the Learning Sciences – ICLS 2022* (pp. 2006-2007). Hiroshima, Japan: International Society of the Learning Sciences.

Research Conference Presentations

Sager, M., **Milton, S.**, & Walkington, C. (February, 2025). A STEM Summer Camp Approach to Data Science Education. *Data Science Education K-12 Annual Conference*. San Antonio, TX.

Sherard, M., **Sager, M. T.**, Milton, S., Dhingra, K., Petrosino, A., & Walkington, C. (2024, April). *"It Is too perfect for nature": Exploring discussions about the relationship between nature and mathematics* [Roundtable presentation]. American Educational Research Association Annual Meeting, Philadelphia, Pennsylvania, United States.

Petrosino, A., **Sager, M. T.**, Sherard, M., Walkington, C., Washington, J., & Milton, S. (2024, April). *Walking at the Boundaries: Learnings from an RPP Approach to Informal Math Learning*. [Paper presentation]. American Educational Research Association Annual Meeting, Philadelphia, Pennsylvania, United States.

Walkington, C., Milton, S., Pando, M., Lipsmeyer, L., **Sager, M.**, & Beauchamp, Y. (April, 2024). *Generative AI as an avenue for mathematical problem-posing* [Paper presentation]. American Educational Research Association Annual Meeting. Philadelphia, Pennsylvania, United States.

Milton, S., **Sager, M. T.**, Walkington, C., Petrosino, A.J., Dhingra, K. (2023, April). *Learning when creating student-centered math walks* [Paper presentation]. American Educational Research Association Annual Meeting, Chicago, Illinois, United States.

Milton, S., Copeland, M., Govan, T., Wade, R., Wilson, S., & Woods, S. (March 2022). *Place-based Learning: Building the Mathfinder Ecosystem across varied Informal Learning Spaces*. Panel discussion at the *2022 Annual Meeting of the International Science Education Association of Texas*. Austin, TX.

Sager, M. T. & **Milton, S.** (2022, May). *Hidden gems: Exploring underrepresented girls' STEM identities and career interests in informal STEM learning environments* [Poster presentation]. Quantitative Methodology Center 2022 Conference, Columbus, Ohio.

Other Presentations

- Presenter, Pearson Discover STEM Conference. "Rapid Prototyping in the Classroom," November 4–9, 2018, Dubai, UAE, and Riyadh, KSA.
- Presenter, GESS Dubai. "STEM Girls are GEMS Girls," February 28, 2018, Dubai, UAE.
- Presenter, GESS Dubai. "Using EXPO2020 to Teach STEM Skills," February 27, 2018, Dubai, UAE.
- Panelist, GESS Dubai. "Women in STEM," February 28, 2018, Dubai, UAE.
- Presenter, Pearson Big Ideas Forum. "Problem-Based Learning for Conceptual Understanding in Mathematics," November 6–8, 2017, Dubai, UAE, and Riyadh, KSA.
- Presenter, TEDxYouth at Sharjah American International School. "Raising Up Global STEM Girls," May 20, 2017, Sharjah, UAE.
- Presenter, GEMS International Schools Science Networking Event. "STEM Activities for the Science Classroom," January 25, 2017, Dubai, UAE.

BOOK CHAPTERS, REVIEWS, & REFERENCE MATERIALS

Milton, S., & Walkington, C. (in preparation). Rightful Presence in Mathematics: Community-Embedded Informal Math Walks for Empowering Underserved Racially and Ethnically Minoritized Middle School Girls. Book chapter invited (extended abstract accepted) to

[Karen Terrell, Diane Silva Pimentel] STEM Education and Culturally Sustaining Pedagogies: Research, Practices, and Critical Reflections. IGI Global.

Sager, M., **Milton, S.** & Petrosino, A. (2023) Perspective Two: What early career researchers gained from their experience doing partnership research. In *Partnerships for Change: Transforming Research on Emergent Learning Technologies*. (pp. 67-71). Digital Promise.
<https://circls.org/reports/seeing-the-world-through-a-mathematical-lens-a-place-based-game-for-creating-math-walks>

Walkington, C., Dhingra, K., Petrosino, A., Stringer, E., **Milton, S.**, Sager, M., & Sherard, M. (in press). Learner-created math walks in informal learning settings. In M. Huntley, D. Thompson, & C. Suurtamm (Eds.) *International Perspectives on Mathematics Outreach*. Information Age Publishing.

ACADEMIC SERVICE

SMU Diversity, Equity, and Inclusion Committee Member

Leadership Team (2023 – Present)

2025 Routes & Roots Event Co-chair (Featured Panelists: Dr. Bianca Baldrige, Harvard University & Dr. Eric Dearing, Boston College)

2024 STEMequities Event Co-chair (Featured Panelists: Dr. Nicole Joseph, Vanderbilt University & Dr. Ebony McGee, Johns Hopkins University)

SMU Educational Researcher Student Association

Leadership Team (2023)

PROFESSIONAL ORGANIZATION AFFILIATIONS

The International Society of the Learning Sciences (ISLS)

General Member since 2021

American Educational Research Association (AERA), Divisions C

General Member since 2022

AWARDS & HONORS

- National Summer Learning Association Excellence in Summer Learning (The GEMS Camp), 2025
- Recipient of Provost Summer Research Grant from Southern Methodist University, 2025
- Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (The GEMS Camp), 2025
- Recipient of the American Educational Research Association Graduate Student Assistance Fund toward the Annual Meeting, 2023
- Recipient of Ebby Award for significant contribution of girls and women in North Texas, 2022
- Honored as a Women Who STEAM Hidden Figure, Dallas Links Chapter, 2021
- Named Six STEM Influencers Helping to Bridge the Gap for Blacks, Hispanics, and Women Forbes Technology Council, July 30, 2021
- Keynote Speaker, Dallas Independent School District Gifted & Talented Symposium, October 2020
- Texas Girls Collaborative Project, Outstanding Educational Organization – The GEMS Camp, December 2020

GRANTS AWARDED

- **National Summer Learning Association:** New York Life Foundation Summer Learning Excellence Award, 2025

- **Texas Workforce Commission Camp Code:** Programming funds for place-based coding summer camps for underserved girls in Texas
Amount: 2025 (\$99,000)
- **American Association of University Women Community Action Grant:** Programming funds to implement The GEMS Camp Lab at MLK - Al Good for the Hood
Amount: 2025 (\$10,000)
- **Lyda Hill Philanthropies:** Programming funds for development of cybersecurity curriculum
Amount: 2025 (\$20,000)
- **Harold Simmons Foundation:** General operating funds for nonprofit programming
Amounts: 2021 (\$25,000), 2022 (\$30,000), 2023 (\$30,000), 2024 (\$30,000)
- **City of Dallas South Dallas Fair Park Opportunity Fund:** Martin Luther King, Jr. Community Center out-of-school STEM club activities
Amounts: 2024 (\$32,000)
- **Turn Every Page Foundation:** STEM club activities and summer camp programming
Amounts: 2024 (\$24,500)
- **H.K. Hudson Foundation:** General operating funds for nonprofit programming
Amounts: 2021 (\$25,000), 2022 (\$30,000), 2023 (\$30,000), 2024 (\$35,000), 2025 (\$35,000)
- **Byrne Family Foundation:** STEM club activities and summer camp programming
Amounts: 2022 (\$8,000), 2023 (\$10,000), 2024 (\$35,000)
- **Charles Schwab Foundation:** General operating funds for nonprofit programming
Amounts: 2022 (\$5,000), 2023 (\$26,000), 2024 (\$26,000)
- **Texas Instruments:** Summer STEM camp programming
Amounts: 2020 (\$15,000), 2021 (\$15,000), 2022 (\$15,000), 2023 (\$15,000)
- **Cummins Community Action Grant:** STEM club activities and summer camp programming
Amount: 2024 (\$27,500), 2025 (\$30,000)
- **Metropolitan United Way of Dallas:** Social Innovation Accelerator award for nonprofit scalability and leadership development
Amount: 2024 (\$70,000)
- **Jack and Jill Foundation STEM Action Grant:** STEM club activities and summer camp programming
Amount: 2024 (\$10,000)
- **Society for Science:** Summer STEM camp programming
2019 (\$5,000), 2020 (\$5,000), 2021 (\$5,000), 2024 (\$5,000)
- **High Tech High Heels Foundation:** Summer STEM camp programming
Amounts: 2019 (\$15,000), 2020 (\$15,000), 2021 (\$15,000), 2022 (\$15,000)
- **NBC Universal-Comcast Community Action Grant:** General operating funds for nonprofit programming
Amount: 2023 (\$25,000)
- **Facebook Meta Community Action Grant:** General operating funds for nonprofit programming
Amount: 2022 (\$15,000)
- **UWorld Community Impact Grant:** STEM club activities and summer camp programming
Amount: 2024 (\$15,000), 2025 (\$15,000)
- **Communities Foundation of Texas:** Summer virtual STEM camp programming
Amount: 2020 (\$10,000)
- **NRG Foundation:** Summer STEM camp programming
Amount: 2022 (\$5,000)
- **Texas Women's Foundation:** Summer virtual STEM camp programming
Amount: 2021 (\$5,000)
- **Heritage Giving Circle:** Summer STEM camp programming

Amounts: 2022 (\$10,000), 2023 (\$10,000)

- **Village Giving Circle at Communities Foundation of Texas:** STEM club activities and summer camp programming
Amounts: 2021 (\$10,000), 2022 (\$10,000), 2023 (\$10,000)
- **H-E-B Tournament of Champions Foundation:** Summer STEM camp programming
Amounts: 2014 (\$5,000), 2015 (\$5,000), 2018 (\$5,000)
- **National Girls Collaborative Project Mini-Grant:** Summer STEM camp programming
Amount: 2011 (\$1,000)

ACTIVISM AND ADVOCACY

Texas Girls Collaborative Project, Austin, TX

Leadership Steering Team (2022 – 2026)

Women & Girls' STEM Summit Planning Committee (2023 – 2024)

Advocate for girls in STEM across Texas through policy initiatives and community outreach. Build strategic networks with STEM-focused organizations statewide, organize annual gatherings to advance STEM equity, and champion initiatives to address barriers for girls in STEM.

Queen City Neighborhood Association, Dallas, TX

Beautification and Code Compliance Leader (June 2022 – present)

Lead efforts to advocate for beautification projects in a historically Black neighborhood in collaboration with the City of Dallas District 7 Councilman. Successfully secured a Historical Designation to halt gentrification and illegal dumping, ensuring preservation of the neighborhood's cultural integrity.

South Dallas Billy Dade Action Committee, Dallas, TX

Committee Member (January 2023 – present)

Advocate for the educational reuse of the closed Billy E. Dade Middle School to prevent its sale for commercial development. Represent community concerns at city and district meetings, contribute to proposal writing, and promote solutions that align with the community's educational and cultural needs.