Mia S. Shaw

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EDUCATION

Doctor of Philosophy in Teaching, Learning, and Teacher Education   Starting Aug 2017
University of Pennsylvania
Advisor: Dr. Yasmin Kafai

Master of Education in Curriculum and Instruction   May 2014
University of Nevada, Las Vegas

Bachelor of Science in Human Biology with Honors   June 2012
Stanford University
Honors Thesis: "The Birds, The Bees, and Everything in Between: Exploring The Sex Education Experiences of African-American College Students
Advisors: Dr. Lisa Medoff and Dr. Jennifer Wolf

RESEARCH INTERESTS

Designing STEAM+CS-rich making environments where Black and Brown youth design artifacts that author expanded identities and restory dominant narratives about STEM and computer science.

JOURNAL PUBLICATIONS (Peer-reviewed)

Shaw, M. S., Fields, D. A., & Kafai, Y. B. (accepted). Leveraging Local Resources and Contexts for Inclusive Computer Science Classrooms: Reflections from Experienced High School Teachers Implementing Electronic Textiles. *Computer Science Education*.

Shaw, M. S., Fields, D. A., & Kafai, Y. B. (2019). Connecting with Computer Science: Electronic Textile Portfolios as Ideational Identity Resources for High School Students. *International Journal of Multicultural Education, 21(*1).

CONFERENCE PROCEEDINGS (Peer-reviewed)

Shaw, M.S., Coleman, J.J., Kafai, Y.B., & Thomas, E.E. (2019). Restorying geek identity: Reimagining computer science connections with youth of color through collaborative quilts. In *Proceedings of the Second Connected Learning Summit.*

Kafai, Y.B., Fields, D.A., Lui, D., Walker, J.T., **Shaw, M.S.**, Jayathirtha, G., Nakajima, T., Goode, J., & Giang, M.T. (2019). Stitching the loop with electronic textiles: Promoting

equity in high school students' competencies and perceptions of computer science. SIGCSE 2019, Minneapolis, MN: ACM.

Shaw, M.S., Walker, J.T., & Kafai, Y.B. (2019). Arguing about Synthetic Biology in 140 Characters or Less: Affordances of Microblogging for High School Students Discussions of Socio-Scientific Issues. *In Proceedings of the 2019 Computer-Supported Collaborative Learning Conference of the International Society of the Learning Sciences.*

Kafai, Y.B., Fields, D.A., Lui, D.A., Walker, J.T., **Shaw, M.S.**, Jayathirtha, G., Nakajima, T.M., Goode, J., & Giang, M. (2019). Stitching the Loop with Electronic Textiles: Promoting Equity in High School Students' Competencies and Perceptions of Computer Science. *In Proceedings from SIGCSE '19: The Fiftieth ACM Technical Symposium on Computer Science Education.* Minneapolis, MN: ACM. Available at http://www. constructionism2018.fsf.vu.lt/proceedings.

Fields, D.A., **Shaw, M.S.**, & Kafai, Y.B. (2018). Personal learning journeys: Reflective portfolios as "objects-to-learn-with" in an e-textiles high school class. In V. Dagiene & E. Jastuė, *Constructionism 2018: Constructionism, Computational Thinking and Educational Innovation: conference proceedings (*pp. 213-223)*. Vilnius, Lithuania.

Walker, J.T., **Shaw, M.S.**, Kafai, Y.B., Lui, D.A. (2018). Biohacking food: A case study of science inquiry and design reflections about a synthetic biology high school workshop. *Proceedings from ICLS '18: The Thirteenth International Conference of the Learning Sciences.* London, UK: ISLS.

Lui, D., Jayathirtha, G., Fields, D.A., **Shaw, M.S.**, & Kafai, Y.B. (2018). Design considerations for capturing computational thinking practices in high school students' electronic textile portfolios. *Proceedings from ICLS '18: The Thirteenth International Conference of the Learning Sciences.* London, UK: ISLS.

CONFERENCE PROCEEDINGS (Not peer-reviewed)

Shaw, M.S., Coleman, J. J., Kafai, Y. B. & Thomas, E. (2020, Apr 17 - 21) *Restorying Geek Identity: A Case Study of Underrepresented Youth Reimagining Connections Through Collaborative Counter-Storytelling* [Structured Poster Session]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/yxtgzsj7 (Conference Canceled)

Fields, D. A., Kafai, Y. B., Lui, D., **Shaw, M.S.**, Jayathirtha, G. & Walker, J. T. (2020, Apr 17 - 21) *Supporting Computer Science Engagement and Learning Through Reflective,*

Process-Based Portfolio Assessments [Structured Poster Session]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/y3kvjcfh (Conference Canceled**)**

Walker, J.T., **Shaw, M.S.**, & Kafai, Y.B. (2019). bioCAKES: Making with Biology. *Proceedings of Eighth Annual Conference on Maker Education (Fablearn 2019).*

SYMPOSIA, DEMOS, WORKSHOPS, & PRESENTATIONS

Jayathirtha, G., Kafai, Y. B., Lui, D., **Shaw, M.S.**, & Cho, J. Y. (2019). Collaborative Coding and Composing of JazzHands: Integrating the Learning of Advanced Computational Concepts with Electronic Textiles to Make Music Wearables. In the Proceedings from SIGCSE '19: the Fiftieth ACM Technical Symposium on Computer Science Education. Minneapolis, MN: ACM.

RESEARCH EXPERIENCE

University of Pennsylvania - Graduate School of Education   Sept 2017-present
Principal Investigator: Yasmin B. Kafai, EdD
-   Collaborated on the implementation of electronic textiles research incorporating art (Google CS-ER: Supporting Computer Science Education Research in K–12 Grant)
-   Collaborated on the implementation of the Biomakerlab project (NSF Grant #1623018)
-   Collaborated on the implementation of electronic textiles research in teaching and assessment (NSF Grant #1509245).

Principal Investigator: Pam Grossman, PhD   July 2017-May 2018
-   Conducted research for the Lucas Education Research Student Voice in Project Based Learning project

Stanford University - Public Service Scholars Program   June 2012
-   Implemented a descriptive, retrospective study of African-American college students' sex education experiences using qualitative and quantitative questionnaire methods

TEACHING EXPERIENCE

Instructor   Sept 2019-present
TeenSHARP
-   Developed and taught college-level course "Making for Better Futures: Restorying through Video Game Design" for high school students as part of the TeenSHARP Cyber SPARK Series
-   Developed and taught college-level course "Exploring and Reimagining Science Through the Lens of Race" for high school students as part of the TeenSHARP Strivers program.

Teaching Assistant   Jan 2020-May 2020

University of Pennsylvania Graduate School of Education "Maker Studio" course
- Facilitated class discussions and taught two class sessions focused on the inclusive and critical making, as well as the politics of making

Presenter, "Girl-Friendly Making"   May 2017
Maker Faire 2017
- Facilitated a panel with Techbridge Girls girls about the advantages of creating girl-friendly maker spaces.

Instructor   Nov 2016
Bay Area Science Festival 2016
- Facilitated two private, hands-on workshops for Chevron employees and their children during the festival

Instructor   Mar 2016
US2020 STEMfest
- Led a hands-on, engineering design challenge for middle school students

Program Coordinator   July 2014-present
Techbridge Girls
- Coordinated and implements Techbridge Girls after-school and summer programs for middle school girls
- Refined and pilots science, engineering, and technology curricula that is aligned with Next Generation Science Standards
- Conducted professional development workshops for teachers, role models, and professional audiences about effective strategies for engaging youth in STEM
- Established an ambassador leadership program for eighth-grade participants

Corps Member   Aug 2012-June 2014
Teach For America
- Administered appropriate eighth-grade level, district curriculum which is aligned with the Nevada State Standards.
- Diagnosed and analyzed student progress and provide appropriate instruction.
- Founded an after-school mentorship program ("Project GLOW: Girls Learning Our Worth") for eighth grade girls.

Teaching Assistant   June 2010-Aug 2010
Stanford Medical Youth Science Program
- Tutored and mentored 24 students over the course of the summer, emphasis on careers in sciences.
- Co-coordinated academic enrichment and social events.
- Connected students with Stanford faculty and health professionals.

TECHNICAL SKILLS

- Proficient in block-based programming (Scratch and MakeCode), Arduino (Lilypad, Makey Makey, Circuit Playground)
- Proficient in Windows OS, Mac OS, and Salesforce

LANGUAGES

English: Fluent
Spanish: Classroom knowledge

HONORS AND AWARDS

Dean's Award for Academic Excellence   May 2012
Dean's Award for Academic Excellence   May 2009