

Martha Merson

Project Director

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Program/Areas of Interest

Informal STEM education for adults and school age children; Professional development for those in informal settings and for non-credentialed workers; Adult Basic Education; Science communication; The intersection of the arts, health literacy, and STEM

TERC Projects

- [iSWOOP](#)
- [EMPower, Extending Mathematical Power to Adults](#)
- [Mixing in Math: Transforming the Role of Math in Afterschool Programs](#)
- [Statistics for Action](#)



Biographical Summary

Martha Merson serves as a Principal Investigator at the Education Research Collaborative at TERC in Cambridge, MA. For 14 years, she has worked on formative research and curriculum design related to promoting understanding of real-world math concepts.

Martha is currently PI of iSWOOP. For this project, National Park Service interpreters and scientists at six national parks collaborate on developing a digital library of researchers' visualizations for use with the public. TERC will work with the interpreters on interactive techniques to increase curiosity, visual and science literacy, and enthusiasm for park-based research among park visitors. This work is based on a pilot study at Carlsbad Caverns to determine how best to bridge the distance between scientists and their research and the park visitors. The project leverages the talents of park interpreters who are the face to the public and often are gifted, knowledgeable storytellers of the park's history and natural features.

She was one of the main authors of *EMPower: Extending Mathematical Power*, a ground breaking math curriculum produced by TERC appropriate for adults returning to school for a second chance and young adults, especially those who are high school age and yet struggle with middle school level mathematics. EMPower helps students develop mathematical proficiency to engage with the world more effectively, whether that be as workers, as caregivers, in the community, or as they seek high school credentials and further education. In 2015 Martha coordinated the revision of three of the books in the series distributed by McGraw-Hill, in use in learning centers across the country.

She led *Statistics for Action* (SfA, 2007-2013). This NSF-sponsored project explores how environmental organizers and the community groups they serve can deepen their own understanding of math as well as be conduits for others' understanding. Citizens who confront environmental issues such as landfill expansions or incinerator permits face a deluge of data from air, soil, and water quality reports, as well as financial and health claims about benefits and risks. SfA resources that are available for free downloading.

For the *Mixing in Math* and *Math off the Shelf* projects, Martha developed training modules, supported library and after-school partners, and contributed to materials design.

On SfA, *EMPower*, and *Mixing in Math*, Martha has worked closely with external evaluators—particularly on the design of instruments capturing impact such as shifts in attitude toward math and behavior change.

Martha volunteers for the The New Garden Society and edits fiction for fun.

Selected Publications

- **Breast Cancer and the Environment** Martha Merson and Michele M. Sedor (1997) . Boston, MA: World Education.
- **EMPower Mathematics** Mary Jane Schmitt, Myriam Steinback, Tricia Donovan, and Martha Merson (2004) . New York: McGraw-Hill.
- **Implementing the Massachusetts Adult Basic Education Math Standards: Our Research Stories** Esther Leonelli, Martha Merson, and Mary Jane Schmitt (eds.) (1994) *Massachusetts Department of Education* . Malden, MA.
- **Math is Healthy** Martha Merson (2005) *Skills for Chronic Disease Management* .
- **Measurement in Adult Education: Starting with Students' Understandings** Myriam Steinback, Mary Jane Schmitt, Martha Merson, and Esther Leonelli ; D. Clements and G. Bright (eds.) (2003) *Yearbook of the National Council of Teachers of Mathematics* . Reston, VA: NCTM.

Associations

2005: Speaker at the Schweitzer Fellows lecture series on numeracy and health; 2003-2006: Jamaica Plain representative to the Community Advisory Committee overseeing Massport Authority; 1995: Training Guide Developer—Drafted the training guide and other components of the Breast and Cervical Cancer Prevention Kit developed with funding from the CDC (National Organizations Strategies for Early Detection and Control of Breast and Cervical Cancer)