

# CHALLENGES FOR PUBLISHING RESEARCH RESULTS ON MATHEMATICS PROFESSIONAL DEVELOPMENT

Paola Sztajn<sup>1</sup>, Einat Heyd-Metzuyanim<sup>2</sup>, Jill Adler<sup>3</sup>, Peter Liljedahl<sup>4</sup>, Ronnie Karsenty<sup>5</sup>, & Karin Brodie<sup>3</sup>

<sup>1</sup>North Carolina State University, North Carolina

<sup>2</sup>Technion-Israel Institute of Technology, Israel

<sup>3</sup>University of the Witwatersrand, Johannesburg

<sup>4</sup>Simon Fraser University, Canada

<sup>5</sup>Weizmann Institute of Science, Israel

*The overarching goal of this new Working Group is to explore the concern that there are existing results and insights from research on mathematics professional development (MPD) that are not being published in major journals in the field. The group will identify the nature of the problem, potential sources, and possible solutions.*

## **PUBLICATION AND RESEARCH ON TEACHERS MPD**

The growth of research and publications regarding the mathematics professional development (MPD) of K-12 teachers is a significant mark of researchers' increased attention to this area of scholarship. For example, an ERIC search using the terms "mathematics" and "professional development" shows that the number of publications in English doubled between the 1990s and 2000s and doubled again from 2000s to 2010s with 3,419 papers only in this last decade. Reviews of this, however, show that a significant amount of the papers published examine small case studies (Sztajn, Borko & Smith, 2017). Whereas it is often considered that the literature reflects the field's significant engagement in small case studies at the expense of other approaches or research phases (Borko, 2004), it is possible that the state of the literature also represents the types of manuscripts that are being accepted for publication.

The fact that important work on MPD might not be getting published received recent attention from the *Journal of Mathematics Teacher Education*, which put out, in 2020, a call for papers on MPD that addressed findings that might not have been published because the results were non-significant, the project did not unfold as intended, or the applied nature of the work created methodological challenges. The idea that there are important results about MPD not being

published reflects the experiences of the organizers of this group. For example, within our own research projects, we have opted to publish case studies when larger studies did not find their way into mainstream journals. Or we have opted to attend to smaller theoretical aspects when reviewers expressed less interest in larger parts of the studies. Collectively, these experiences raise an important question: what is lost in our knowledge of MPD when important research results do not seem to fit major mathematics education journals?

The goal of this new Working Group is to explore reasons why papers on MPD might not get published, consider the issues in the field that might be contributing to this problem, examine what is lost in the field, and propose short- and longer-term solutions. The group aims to contribute to research on MPD by changing the dominant discourse in the field and increasing the amount, variety and quality of research that gets published.

Session (1):

*Activity 1--Welcome and framing the issue:* The work of the group will begin with a quick introduction to the overall issues that frame the proposed discussions.

*Activity 2--Understanding the phenomenon of interest:* Each organizer will briefly share their experiences with acceptances /rejections around publishing MPD research.

*Activity 3--Examining the sources of the phenomenon:* Participants will self-select into four small groups led by the first four organizers and discuss the stories shared, their own stories, and potential causes for the phenomenon such as: (1) tensions between research and evaluation; (2) existing funding models; (3) current dominant discourse; or (4) cultural differences. Groups will record their experiences in a shared document.

*Activity 4-- Summarizing initial discussions:* To conclude the first meeting, organizer will provide a summary of ideas from their groups.

Session (2):

*Activity 1--Establishing shared ideas:* Organizers will present their understanding of the phenomenon based on the ideas participants added to the shared document.

*Activity 2--Additional forces that keep the phenomenon in place:* The two last organizers (and editors from the JMTE special issue mentioned earlier) will present what they learned from the call for proposals and the papers received.

*Activity 3--Moving forward:* In small groups, participants will consider ways to address current forces that contribute to the occurrence of the phenomenon and propose steps to move forward.

*Activity 4--Next steps:* In a plenary format, the group will collectively generate guidelines for authors, reviewers and editors about opportunities for publication of key results regarding research on MPD and discuss next steps for the work of the group.

### **References**

- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3–15.
- Sztajn, P., Borko, H., & Smith, T. (2017). Research on mathematics professional development. In J. Cai (Ed.), *Compendium for research in mathematics education* (pp. 793-823). Reston, VA: National Council of Teachers of Mathematics.