Investigations in Mathematical Learning

Special Issue Call for Manuscripts:

Defining, Cultivating, and Sustaining Productive Struggle in Mathematics Classrooms

Guest Editorial Team: Dr. Tashana Howse, Dr. Hiroko K. Warshauer, Dr. Monica Anthony & Dr. Mary Ramos-Duke

Productive struggle is a key component of effective mathematics teaching and learning (NCTM, 2014; AMTE, 2017). While there has been significant variety in how mathematics education researchers (Jarrry-Shore & Richardson, 2024; SanGiovanni et al., 2020; Warshauer, 2015) have described and conceived of productive struggle (e.g., delve deeply, problem-solving, perseverance), Hiebert and Grouws' (2007) definition of *struggle* as "students expend effort in order to make sense of mathematics, to figure something out that is not immediately apparent" (p. 387) has been heavily relied on to ground conceptualizations of productive struggle. For this IML special issue, we are seeking proposals that approach productive struggle from a variety of perspectives. We encourage authors to situate their work within existing or novel conceptualizations of productive struggle, drawing from both research and practice. By sharing diverse framings and approaches, we hope to foster a rich dialogue that advances our collective understanding of how to define, cultivate, and sustain mathematics learning through struggle.

We invite scholars to submit proposals for this special issue that delve into the constructs of productive struggle, which may include addressing questions including, but not limited to:

- What does it mean to help or intervene as a teacher when intending to support struggling students? (whether social struggles or mathematical struggles)
- How can teachers be supported in embracing the vulnerability necessary to cultivate experiences of mathematical struggle?
- How does teacher feedback influence the facilitation or hindrance of productive struggle among students, both individually and collaboratively?
- In what ways does experiencing productive struggle impact students' perceptions of their mathematical identity and sense of belonging?
- How can educators create classroom environments that simultaneously promote productive struggle and foster a strong sense of belonging?
- What is the impact of integrating social justice themes into mathematics curricula on students' opportunities for struggle and cultivation of sense of belonging?
- Which instructional practices are most effective in supporting students in productive struggle while maintaining the mathematical goals of the lesson or task?
- What opportunities do multilingual learners and/or students with disabilities have to productively struggle with mathematics?
- What are effective methods for developing in-service and pre-service teachers' capacity for noticing different types of struggle and attending to student struggle (both through video and in real-time)?

While traditional conceptions and investigations of productive struggle tend to focus on the cognitive experiences of the learner, we are especially interested in scholarship that investigates how students' individual and collective engagement in mathematically productive struggle may support student authority, agency, and sense of belonging intersected with the Rights of the Learner (RoTL; Kalinec-Craig, 2017). The editorial team welcomes paper proposals from a variety of methodologies and theoretical frameworks.

Submission Instructions:

The submission deadline for extended abstracts is October 2, 2025. Authors should submit extended abstracts to the guest editorial team at **IML.SpecialIssueEDteam@gmail.com** with the subject "IML Extended Abstract". If you have questions about the topics or submission process, then email the editorial team.

Extended abstracts should be submitted as PDFs. Each extended abstract is limited to five (5) double-spaced pages, including references (references may be single-spaced), written in 12-point Times New Roman font and must follow APA 7 guidelines. Extended abstracts should include:

1. A brief description of the problem or topic
2. Clearly stated research questions
3. An explicit definition of how productive struggle is conceptualized in their study
4. A description of methods, results, and implications

Authors will receive editor feedback on extended abstracts prior to submitting full papers for blind review. A double-blind peer review process reviews all IML submissions for the special issue. Full manuscripts for this special issue may not exceed 35 double-spaced pages (size 12 font, one-inch margins) and must follow APA 7 guidelines. This includes text, abstract, references, table(s), figure(s), and appendices. References may be single-spaced; however, all other text should be double-spaced. Tables and figures may be placed on individual pages or embedded within the text, but not both. It is an IML requirement that published manuscripts have at least one author who is a current member of the Research Council on Mathematics Learning at the time when their manuscript is accepted.

Timeline:

- Extended abstracts due: October 2, 2025
- Editor feedback on extended abstracts: November 2, 2025
- Full manuscripts due: January 2, 2026
- Manuscript reviews and decisions are returned to authors: April 2, 2026
- Accepted manuscript revisions due: June 2, 2026
- Manuscript reviews returned to authors: September 2, 2026
- Final manuscript due: October 2, 2026