

How is Gender Discussed? A Textual Analysis of RUME Proceedings

Anne Cawley
Cal Poly Pomona

Matthew Voigt
Michigan State University

Ayesha Maliwal Bundy
Michigan State University

Andrew Baas
Texas State University

Gender has long been studied within math education, evolving from deficit and assimilationist models, positioning girls' lower participation as a problem to be fixed, to feminist and sociocultural frameworks that conceptualize gender as relational and intersecting with other axes of identity (Leder, 2019). The "leaky pipeline" continues to be well-documented (Blickenstaff, 2005) and persistent disparities in representation and persistence remain in math-intensive fields (Brown & Leigh, 2021). Despite this history, little is known about how the undergraduate mathematics education research community itself conceptualizes and engages with the construct of gender. Because gender functions as both an empirical tool and a critical lens (Leder, 2019), examining how it has been theorized, operationalized, and represented in RUME proceedings sheds light on the field's evolving commitments to equity and inclusion. *This gap motivates our landscape analysis of RUME proceedings from 2018 to 2024 to map how gender is being operationalized.*

Our gender textual analysis draws from previous work analyzing race (Contreras et al., 2025), and began by performing pattern-based text retrieval on the corpus, retrieving a 40-word list of gender-related terms. The list included terms related to binary identities (e.g., "woman", "male"), non-binary and fluid identities (e.g., "non binary," "two spirit"), transgender experiences (e.g., "trans"), related social and biological concepts (e.g., "cis gender," "pronoun"), and terms for gender expression (e.g., "masculine," "gendered"). We used the results of the text retrieval to assign each paper to one of several categories based on the terms they used, refining this categorization through regular team discussions. Papers were coded based on the role of gender in the research: *Core* for a central focus (and a summary noted); *Peripheral* if gender was substantive but not central (like positionality or an analytical tool component); *Non-Focal* if gender was only mentioned in passing (e.g., unanalyzed demographics or quotes); and *Unrelated* if gendered terms appeared only within the references or embedded within math problems.

Our preliminary analysis indicated that of the 1,426 reports and papers published in the proceedings from 2018-2024, 438 papers (30.7%) contained a keyword. Most of the keywords were found within contributed (50.7%) and preliminary reports (23.7%), with 17.8% of posters and 5.3% of theoretical reports containing keywords. 13.5% of all proceedings containing a keyword were identified as Core while 11.2% were identified as Peripheral, totaling 24.7%. This left 75.3% of papers identified as Non-focal or Unrelated (45.4% and 29.9% respectively). Therefore, a majority of the papers which contained at least one keyword used those keywords only in reference to participant demographics, other authors' work, or in the context of a mathematical problem. These counts demonstrate that less than a quarter of studies which reference gender incorporate it meaningfully in their work, with around one-eighth of papers utilizing it as a central focus to their study. Our poster will further analyze the papers coded as Core and Peripheral to understand the ways that gender is being captured and analyzed (e.g., focus on a specific group, binary comparison, critical intersections). We intend to expand this work to examine the ways in which gender topics are utilized within RUME, to identify the theoretical and methodological tools employed, and to elevate authentic ways of humanizing gender research in mathematics education.

References

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