Topic Study Group 3.13: Language and communication in the mathematics classroom

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Team details

Co-Chairs

Igor' Kontorovich (The University of Auckland, New Zealand; i.kontorovich@auckland.ac.nz)

Christina Krause (Karl-Franzens-Universität Graz, Austria; christina.krause@uni-graz.at)

Members

Paul Dawkins (Texas State University, United States)

Lisa O'Keeffe (University of South Australia, Australia)

Emily Sum (University of Melbourne, Australia)

IPC Liaison

Boris Koichu (Weizmann Institute of Science, Israel)

Overview

TSG 3.13 invites latest research that considers mathematics teaching and learning through the lens of language, communication, and discourse. The TSG continues its predecessor in ICME-14 in Shanghai and previous ICME TSGs on language and communication in mathematics education. The TSG will build on the strong body of mathematics education research on the topic, with a focus on the current states, trends, and developments around important questions that remain.

The group's topic has been approached from various onto-epistemological, theoretical, and methodological perspectives. Research argues that mathematical communication is multi-modal, multi-semiotic, and context-dependent. These aspects are sensitive to social, cultural, and political practices, communicational and interactional norms, protagonists and their power dynamics.

Additional complexities emerge when the topic is situated in a mathematics classroom. We use the notion in an inclusive way to capture a range of spaces that mathematics inhabits, including in-person and online settings; at school and university.

Areas of interest

We welcome research-grounded and theoretically solid contributions that embrace the complexity of the topic. The contributions can report on philosophical, theoretical, and empirical works. We especially encourage research from regions that are poorly represented in the international mathematics education discourse. We welcome research that challenges the state of the art and take critical perspectives.

Of particular interest are contributions that address one or more of the following areas:

- Revisiting the notion of a "mathematical classroom" and its implications on the study of language, communication, and discourse. For instance, how do the three come about in online, hybrid, and in-person classrooms?
- The relations between language, communication, or discourse with such key constructs as mathematics, learning, thinking, understanding, and reasoning.
- The complexity of the interplay between language, communication, or discourse within and outside a mathematics classroom.
- The multi- and trans-modality of mathematical communication (e.g., oral, written, gestural, visual) and language (including sign languages) in the mathematics classroom.
- Similarities and differences in language, communication, and discourse of protagonists in mathematics classrooms (e.g., students and a teacher, student and a learning resource).
- Cross-disciplinary perspectives on the focal theme, including the affordances and the challenges of "borrowing and adapting" from other content areas (e.g., sociology, psychology, linguistics, special education, semiotics, etc.).
- Methodological issues and innovations in studies of language, communication, and discourse in mathematics education.

How to make a submission to this Topic Study Group

Submissions for Topic Study Group Papers and proposals for Posters open 28 April 2023 via the official ICME-15 website, icme15.org. The website also contains a timeline of dates for the activity of the Topic Study Groups in the lead up to the Congress.

For questions about this TSG, please contact the Co-Chairs using the email addresses provided.