



15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia
Come and be counted

Topic Study Group 3.10: Research on mathematics classroom practice at secondary level

Strand B

Team details

Co-Chairs

Orly Buchbinder (University of New Hampshire, United States; orly.buchbinder@unh.edu)

Marita Friesen (Pädagogische Hochschule Heidelberg, Germany; friesen@ph-heidelberg.de)

Members

Colin Foster (Loughborough University, United Kingdom)

Ida Mok (The University of Hong Kong, Hong Kong)

Colleen Vale (Monash University, Australia)

IPC Liaison

Nad'a Vondrová (Univerzita Karlova, Czech Republic)

Overview

This Topic Study Group aims to advance understanding of the nature, importance, and challenges related to research on classroom practice at the secondary level; to explore underlying theories, methodologies and analytic tools supporting this research. As the quality of teaching is instrumental to improving student mathematical learning, TSG3.10 will address the broad range of issues pertaining to developing systematic research on teaching and learning mathematics at secondary level. We intend to promote exchanges and collaboration across different education systems, with the goal of enhancing the quality of research on teaching and learning mathematics in secondary classrooms.





15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia
Come and be counted

The TSG seeks to provide an international platform for mathematics education researchers, practitioners, and policy makers to discuss and disseminate research approaches and findings on classroom practices and share a variety of theoretical perspectives and methodologies to maximize exchange of ideas about secondary mathematics classroom research.

The focus of TSG3.10 is on issues related to approaches for conducting research on secondary mathematics classrooms, reports of research examining teaching and learning in mathematics classrooms, and on classroom practices of students and teachers.

Classroom practice includes the activities and interactions of teachers and students around mathematical content. It may involve examination of instructional practices of mathematics teachers to promote student mathematical learning, as well as engagement, and inclusion of all students within educational settings; the interactions among students, teacher, and the mathematical content to be taught and learned; the practices of students in mathematics classrooms including the learning experiences, engagement, participation, access, and agency of students in mathematics learning. Research aims to understand the nature and extent of the interactions, the complexity of the didactic system, the roles of the teacher and students in the interaction processes when the mathematical content is taught and learned, and the complexity of the activities in mathematics classrooms. Papers that explore how factors outside the classroom (e.g., school leadership, policies, organizational dynamics) shape instruction inside classrooms are also welcome, as well as papers pertaining to research on online or virtual classroom practices emerging during the pandemic and their potential impact on face-to-face classroom teaching and learning in the post-pandemic era.

Research on classroom practice may involve a variety of theoretical perspectives and rely on a variety of methodological approaches. Papers that provide detailed information on specific and novel methodologies and techniques for research in mathematics classrooms are especially welcome. The submissions in TSG3.10 may focus on empirical research contributing to understanding aspects of secondary classroom practice, on theoretical perspectives specific to classroom practice at the secondary level and novel methodological approaches to conceptualizing, operationalizing, assessing, and improving different aspects of classroom practice. All contributions should be grounded in theory and contribute to advancing theoretical, methodological and practical knowledge on research on classroom practice at secondary level. Contributions by young/emerging researchers are particularly welcome.





15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia

Come and be counted

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.

