

Topic Study Group 4.2: Preservice mathematics teacher education for the secondary level

Strand B

Team details*

Co-Chairs

Levi Elipane (Philippine Normal University, The Philippines; elipane.le@pnu.edu.ph)

Bronwyn Reid-O'Connor (University of Sydney, Australia; bronwyn.reidoconnor@sydney.edu.au)

Member

Rongjin Huang (Middle Tennessee State University, United States)

Kathleen Nolan (University of Regina, Canada)

Dr. Vesife Hatisaru (Edith Cowan University, Australia)

IPC Liaison

David M. Gómez (Universidad de O'Higgins, Chile)

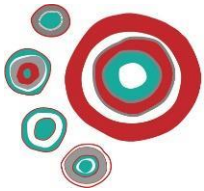
Overview

Topic Study Group 4.2 (TSG 4.2) is dedicated to sharing and discussing research, theory and practice related to the various aspects of secondary mathematics teacher education. It aims to offer an overview of current significant trends in this area through contributions from experts in the field, with an international perspective, to enrich the discussion of directions for future research.

In discussing research studies from different countries, TSG participants will have an opportunity to learn about international perspectives and practices in relation to the education of preservice

* Team details correct at time of print; 28 April 2023





15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia

Come and be counted

secondary mathematics teachers (PSMTs). For example, factors influencing the similarities and differences in the formal mathematics education of teachers, types of teacher education experiences, pathways to certification, and curricula for mathematics teacher education will be explored.

A possible post-congress publication on contributions presented at TSG 4.2 will be discussed during the conference.

Areas of interest

TSG 4.2 invites submissions about research that address the following and other related topics regarding preservice secondary mathematics teachers:

PSMT Knowledge

- The nature of PSMTs' knowledge.
- Theoretical and methodological frameworks for studying PSMTs' knowledge.
- The development of PSMTs' knowledge in the context of teacher education.
- The relationship between PSMTs' knowledge and their practices.
- Assessment of PSMTs' mathematics knowledge for teaching.
- Preparation of PSMTs to teach STEM/STEAM.
- Preparation of PSMTs to teach diverse learners.

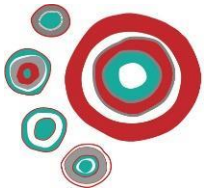
PSMT Professional Beliefs and Identities

- Theoretical and methodological frameworks for studying PSMTs' professional identities.
- Experiences contributing to the development of PSMTs' professional identities during preservice education.
- Experiences contributing to the changes in PSMTs' professional beliefs during preservice education.
- The relationship between PSMTs' practicum teaching and professional identity.
- The nature and development of PSMTs' productive dispositions.

PSMT Field Experiences

- Models for field experiences (e.g., co-planning/co-teaching and paired placements) that best support PSMTs' development of effective teaching practices.





15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia

Come and be counted

- PSMTs' experiences in mathematics classrooms and issues related to their school placements.
- Mechanisms that foster bidirectional relationships between partner schools and higher education institutions to support PSMTs in their field experiences.
- Experiences that PSMTs should have prior to student teaching.
- Activities to help PSMTs to become reflective practitioners during student teaching.
- Different types of field experiences required for PSMTs' certification.
- Best practices for preparing mentor teachers to work with PSMTs.
- Professional Learning Communities that nurture PSMTs.

Technologies, Tools and Resources

- Models for PSMTs' TPACK, and its development and assessment.
- Technology, tools, and resources that support PSMTs' learning.
- PSMTs' use of technology, tools, and resources.

Recruitment and Qualifications

- Qualifications and teaching standards for PSMTs, with implications for their preparation.
- Recruitment and retention of PSMTs.

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.

