TSG 28 – PRESERVICE MATHEMATICAL TEACHER EDUCATION AT PRIMARY LEVEL

The organizing team

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Members:

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Background to and rationale of TSG 28

It is a multi-faceted task to prepare preservice teachers of mathematics (PSTs) to conduct high-quality teaching. Many agree that teaching competence is not based merely on PSTs academic qualifications, and consequently the concern for problems of practice has grown in programmes for teacher education. This is evidenced, for instance, in attempts to reconsider the knowledge needed in instruction; to work with representations of practice in college–based parts of programmes; to have prospective teachers rehearse and plan for instructional activity while at college; and to capitalise on prospective teachers' field experiences. This links research and development in mathematics teacher education (MTE) to scholarship on teaching and raises issues of (1) what high-quality instruction entails in different contexts and (2) how prospective teachers may develop their capacity to conduct teaching accordingly under different circumstances. In spite of the common interest in preparing PSTs for practice, it is still contentious how best to do so, and the answer to this question may vary across contexts. The rationale of TSG 28 is to engage participants in reflection on, and discussion of, the related theoretical, empirical and practical issues.

Themes for papers

In TSG 28, we discuss research and development work on MTE, including the underlying assumptions about classroom practice and pre-service teachers' and school students' learning. We also discuss the potentials of, and challenges for, the research endeavour itself, that is, questions concerned with the use of different theoretical frameworks and methodologies. The more specific themes are overlapping and include, but are not limited to:

1. Organisation of and resources for mathematics teacher education:

- ✓ The structure and organisation of teacher education programmes, including the relationships among mathematics, mathematics methods, and field placement;
- ✓ The development and use of curricular materials;
- ✓ Potentials and problems with the use of technology when used as a tool for PSTs' own learning and in relation to their future teaching;

2. Linking college-based MTE to practice:

- ✓ Potentials of analysing representations of practice in teacher education;
- ✓ Potentials of rehearsing instructional moves with peers at the college;
- ✓ The character and use of field experiences in primary teacher education, including planning for and reflection on field experiences;

3. Prospective teachers' knowledge, beliefs and identity(ies):

- ✓ PSTs knowledge of and engagement with mathematical contents (algebra, geometry, etc.) and processes (problem solving, reasoning & proof, etc.);
- ✓ Issues of pedagogy and educational psychology as they relate to the subject-specific aspects of the education of primary teachers of mathematics;
- ✓ Affective issues, that is, beliefs, attitudes, emotions, and identities as they relate to pre-service teacher education;

4. Research frameworks and methodologies:

- ✓ The potentials and problems of particular theoretical frameworks and theory networking;
- ✓ Methodological innovations in the study of PSTs of mathematics.

Organisation of TSG 28

Authors of papers for TSG 28 will have the opportunity to present key points from their work. Experienced colleagues will also draw on their knowledge of contemporary issues in mathematics teacher education and respond to groups of papers. We are proud that six leading scholars from different parts of the world have accepted our invitation to be respondents to papers at TSG 28. These scholars are Mike Askew (South Africa), Laurinda Brown (UK), José Carillo (Spain), Ban Heng Choy (Singapore), Leticia Losano (Argentina), and Rykie Didem Taylan (Turkey).