

13th International Congress on Mathematical Education
Hamburg, 24-31 July 2016

Mathematics teacher educators' knowledge sources in coming to know an effective mathematics teaching

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Mathematics education community all around the world paid (and are still paying) a serious research attention on making sense of students and their learning of mathematics by taking cognitive, affective, social, cultural and historical variables into account. These efforts often relate student success and their conceptual understanding, among other things, to mathematics teachers. Hence we have seen an increase in the number of studies focusing on mathematics teachers especially since mid 1990s. The findings of the studies on teaching/teachers point out the complexity of teaching process and suggest that quality of student learning is closely correlated with such factors as the mode and medium of instruction; teachers' pedagogical and subject matter knowledge bases; teachers' personal histories and pre-professional experiences, teachers' beliefs, value judgements and world-views on knowledge-learning-teaching triad. Surely, these factors are (or at least expected to be) shaped and influenced with the mathematics teacher education programs and by mathematics teacher educators (MTEs).

Despite the importance of MTEs in bringing up responsive mathematics teachers to the fast-changing demands of the teaching profession for "effective mathematics teaching", they are the least studied group and we know very little about them. There are numerous questions in need of close scrutiny. For example, who are the MTEs and what qualifications are required to assign such a position? What are (or ought to be) the practices of MTEs? How do the MTEs develop a sense of their profession and duties? What kind of knowledge do MTEs need and how this knowledge is developed? How do the MTEs come to know the "effective mathematics teaching" and how do they (or what do they do to) reflect such knowledge on their teacher training practices? In recent years, there has been a growing interest to the MTEs and some of these questions already began to attract research attention.

Against this background, this lecture will focus on knowledge sources of MTEs in coming to know effective teaching of mathematics. This issue is part of a larger research project which focuses on the MTEs knowledge bases, teacher training practices and evaluations of teacher practices from real mathematics classrooms. During the lecture, findings of the initial analysis will be shared with the participants. MTE's views and evaluations of effective mathematics teaching, their knowledge sources and their reliance on these sources are discussed. On the basis of findings, this lecture will particularly attend to the questions: How do the MTEs come to know the "effective mathematics teaching" and how do they (and/or what do they do to) reflect such knowledge on their teacher training practices? With regard to this question, the lecture will share reflections on the tensions experienced, discrepancies observed, dilemmas faced and the practices valued and rationalized. Participant questions and contributions are certainly important and will be welcome in the lecture.