TSG 9 Teaching and learning of measurement (focus on primary education)

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Measurement topics in this TSG include typical measures such as length, area, volume, and mass as well as time and money. Overall, internationally, there seems to be a lack of attention to measurement instruction in mathematics education at the primary levels. This is in spite of its links to everyday contexts and their applications in areas such as engineering. Additionally, measurement is an area that connects with other mathematical topics including number, and algebraic thinking. Moreover, weak knowledge related to measurement concepts and skills often becomes problematic while studying other subjects. Last, at least in some countries, the connections between measurement and other mathematical subjects have much decreased in the curriculum since the 19th century. The main purpose of the TSG is to better understand conditions and constraints on the teaching and learning of measurement in international contexts, and to consider some possible changes.

Several questions arise relative to the goal:

- To what extent can measurement be a subject in and of itself in primary school mathematics instruction?
- To what extent can measurement be used as a vehicle for connecting and linking other mathematical topics (such as number, operations, algebra, statistics, or geometry)?

- To what extent can other mathematical topics (number, operations, algebra, statistics, or geometry) support the development of measurement concepts in school?
- To what extent can informal knowledge of and conceptual understanding about measurement (including estimation and knowing how to use some instruments) support (or be an obstacle for) rich teaching and learning of measurement or of other mathematical subjects in school?

The perspectives for each of these questions could be theoretical, methodological, historical, or empirical, and from various points of view such as teachers' practices, students' learning, as a mathematical subject, teacher education, curriculum, and so on.