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TEDS-M plenary panel at ICME-12

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TEDS-M Plenary Panel at ICME-12 (July 11, 2012, 15.00-16.30)

Focusing on mathematics learning at school level, mathematics teachers have the strongest influence on student learning because they are directly working with students. Teachers are regarded as key persons of educational change. For example, a meta-analysis on student learning (Hattie, 2003) found that teachers' impact on students' learning is high: Identified factors that contribute to major sources of variation in student performance include the students (50%) and teachers (30%) as the most important factors, whereas home, schools, principals, peer effects (altogether 20%) play a less important role.

Thus intensive research in mathematics teacher education is needed. There is increasing literature about relevant results, however, large-scale findings relative to the conditions, processes, and effects of mathematics teacher education are rare (Adler et al., 2005). Since Mathematical Content Knowledge (MCK) and Mathematical Pedagogical Content Knowledge (MPCK) play a fundamental role for teachers' effectiveness, and many teachers teach as they have been taught, the education of prospective teachers is a crucial phase in teachers' professional development.

The Teacher Education and Development Study in Mathematics (TEDS-M) is the first cross-national data-based study about (primary and secondary) pre-service mathematics teacher education with large-scale samples (see e.g. <http://teds.educ.msu.edu/>; Tatto & Senk, 2011). 23.000 prospective mathematics teachers from 17 countries participated in TEDS-M 2008.

Comparisons among countries are challenging since cultural issues play a major role and programmes vary even within countries. Anyway, it makes sense to look at the achievement of countries in TEDS-M with reference to the Human Development Index (HDI). The study shows Taiwan, Russia and Thailand as overachieving and the USA, Norway and Chile as underachieving countries (see e.g. http://www.oefg.at/text/veranstaltungen/professionalisierung/Beitrag_Bloemeke.pdf).

The Plenary Panel on TEDS-M will involve Panel Members as well as Audience Representatives, in particular coming from the countries mentioned above. Important issues, results and questions of TEDS-M will be presented and discussed, including the topics:

- Teaching and teacher knowledge
- Teacher education and education system
- Research in teacher education and TEDS-M

References

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