

Title of Presentation at YESS5

## **Developing mathematics teaching through inquiry communities involving teachers and didacticians**

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I will talk about the importance of engagement in activity that draws learners into collaborative action through inquiry tasks. This is important for mathematical learners in classrooms. It is important for teachers learning more about what it means to teach and also for didacticians working with teachers to promote learning for both prospective teachers and practising teachers.

A key word here is “inquiry”. I will discuss inquiry as a theoretical construct that is both a *tool* to aid engagement and development, and also *a way of being* in practice. I will suggest that learning at all these levels is most fruitfully an inquiry-based process. The idea of *inquiry community* is rooted in sociocultural theory in which collaboration and dialogue across educational levels and critical questioning of existing practices promote new knowledge both in practice and in the academy.

I will refer to research projects in which I have been involved in the UK and in Norway. These demonstrate ways in which teachers and didacticians as partners have engaged together in research/inquiry to promote better opportunities for students to learn mathematics in school classrooms at all educational levels.

Papers which provide a background to this work are listed below:

- 1] Jaworski, B. (2008). Development of the Mathematics Teacher Educator and its relation to teaching development. In B. Jaworski & T. Wood (Eds.), *International handbook of mathematics teacher education: Vol. 4. The mathematics teacher educator as a developing professional* (pp.335-361). Rotterdam, The Netherlands: Sense Publishers.
- 2] \*Jaworski, B. (2008). Building and sustaining inquiry communities in mathematics teaching development. Teachers and didacticians in collaboration. In K. Krainer (Volume Ed.) & T. Wood (Series Ed.) *International handbook of mathematics teacher education: Vol. 3. Participants in Mathematics Teacher Education: Individuals, teams, communities and networks*. (pp.309-330). Rotterdam, The Netherlands: Sense Publishers.
- 3] \*\*Jaworski B. (2006) Theory and Practice in Mathematics Teaching Development: critical inquiry as a mode of learning in teaching. Journal of Mathematics Teacher Education. Special Issue: Relations between theory and practice in mathematics teacher Education. Vol. 9 number 2, pp. 187-211
- 4] \*\*Jaworski, B. (2003) Research practice into/influencing mathematics teaching and learning development: towards a theoretical framework based on co-learning partnerships. Educational Studies in Mathematics 54, 2-3, 249-282
- 5] Potari, D. & Jaworski, B. (2002) Tackling Complexity in Mathematics Teacher Development: Using the teaching triad as a tool for reflection and enquiry. Journal of Mathematics Teacher Education, 5, 4 pp. 351-380
- 6] Jaworski, B. (1998) 'Mathematics Teacher Research: Process Practice and the Development of Teaching', Journal of Mathematics Teacher Education, Vol. 1 number 1 pp 3-31

\*\* and \* indicate the papers that I consider most valuable.

I attach pre-publication copies of papers [1] [2] [3]