

# **TSG 28- Inservice Education, Professional Life and Development of Mathematics Teachers**

## **Organization of the different papers in sub-themes**

### **Sub-theme 1 :**

#### **Professional life of teachers and professional development-in-practice**

We are here focusing on different experiences lived by teachers during their career and their contribution to professional development (this professional development is situated, rooted in their professional practice)

Q: How these experiences as leader (Nunes), mentor of student teacher or novice teacher beginning to teach (Rhodes and Wilson), or all along a promotion professional system at a more macro level, in a particular culture (Li, Huang) contribute to professional development? In what way?

#### **Papers:**

- Claudia Canha Nunes, Portugal- The development of a mathematics teacher in the role of subject leader
- Ginger Rhodes, Patricia S. Wilson, USA- Mentoring as professional development: A case from secondary level mathematics
- Yeping Li, Rongjin Huang and al., China- Facilitating the development of mathematics teachers'expertise through professional promotion practices in Mailand China

### **Sub-theme 2 :**

#### **Different Approaches to professional development focusing on mathematics**

Different approaches have been developed by researchers or teacher educators focusing on mathematics knowledge, trying to contribute to a deeper understanding of the mathematics teachers teach.

Q: What are the characteristics of these approaches? What kind of mathematics are at the score of these approaches? What are the theoretical and practical background that founded the

projects developed? What do we know about the professional learning taking place in these approaches? What do they suggest regarding the initial teachers' education in mathematics?

**Papers:**

- Jérôme Proulx, Canada- Secondary teachers' professional development through the exploration of school mathematics
- Mario Sanchez, Denmark- Dialogue among in-service teachers in an internet-based mathematics education program
- Bernard Murphy, UK- In-service professional development for teachers of pre-university mathematics

**Sub-theme 3 :**

**Approaches/experiences of professional development in mathematics teaching articulated on practice**

Different alternative approaches have been developed by researchers or teachers educators to support the learning process of practitioners, approaches articulated on their teaching practices and taking account their voice, their point of view, their professional knowledge...

Q : How are they characterized? How do they have tried to take account the challenges and the complexity of the teaching practice in different socio-cultural contexts? What do we know about the professional learning taking place in these approaches?

**Papers:**

**Group A : Collaborative work,**

- Nielce Meneguelo da Costa, Brazil- In-service teacher education : A collaborative basis experience with non-specialist teachers who teach mathematics
- Adair Mendes Nacarato, Regina Celia Grando, Brazil- Formative processes : Sharing learning experiences in geometry
- Ana Cristina Ferreira, Maria Angela Miorim, Brazil - Collaborative work and professional development of mathematics teachers: the analysis of a Brazilian experience
- Ruth Beatty, Cathy Bruce, Canada - Assessing a research/PD model in patterning and algebra

## **Goup B : Writing, investigative activities and self regulated learning**

- Christine Suurtamm, Nancy vezina, Canada- Professional development : Moving from telling to listening
- Carmen Lucia Brancaglion Passos, Brazil - Continuing professional training of mathematics teachers : learning through mathematics investigation
- Bracha Kramarski and Tali Revach, Israel - The role of self-regulated learning in professional growth of mathematical elementary teachers
- Maria Teresa Freitas, Dario Fiorentini, Brazil - Investigating and writing in the professional development of mathematics teachers

### **Sub-theme 4:**

#### **Professional development and curricular changes**

School are today confronted to new curriculum...the implementation of these new reforms often conceived in a top down model ask many questions...

Q : How can we support the persons directly concerned by these curricular changes, taking account of the different problems practicionners encounter?

What suggest the different papers presented here in relation to the process of implementation of curriculum and professional development?

#### **Papers:**

- Naomi Chissick, Israel- Factors affecting the implementation of reforms in secondary school mathematics
- Dario Fiorentini and al., Brazil- Interrelation between teacher development and curricular change : a research program

### **Sub-theme 5 :**

#### **Conceptualization of professional development : designing PD at a macro level**

This last paper propose a different way to approach the undestanding of continuous professional development of mathematics teachers, to overcome the gap between research, practice

#### **Paper :**

- Els de Geest and al., UK - Researching effective continuing professional development in mathematics education.