

**ENHANCING THE PEDAGOGY OF MATHEMATICS TEACHERS TO
EMPHASIZE REASONING AND COMMUNICATION IN THEIR
CLASSROOMS – A PROFESSIONAL DEVELOPMENT PROJECT THAT
INTEGRATED EXPERT KNOWLEDGE INTO PRACTITIONER PRACTICE**

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Abstract

Enhancing the pedagogy of mathematics teachers (EPMT) project exemplifies a critical development in the professional development of teachers in many parts of the world. This development reflects a gradual shift in the centre of gravity away from the University-based, “supply-side”, “off-line” forms of knowledge production conducted by university researchers for teachers towards an emergent school-based, demand-side, on-line, in situ forms of knowledge production by teachers for teachers. Supporters of this transition do not deny the value of university based research but they do insist that in a knowledge economy, improving the quality of teaching and learning is going to depend increasingly on carefully crafted partnerships between university scholars and classroom teachers. Critically, they also insist that one key outcome of such partnerships ought to be the codification, verification, dissemination and institutionalization of expert teacher knowledge. The aims of the project were three fold. The first was to engage mathematics teachers in professional development to improve their classroom pedagogy and ultimately improve student learning in terms of reasoning and communication skills in mathematics lessons. The second was to create teacher practitioner learning communities at the school level who will work together to advance the knowledge they gain from the professional development modules and also put it into practice; and the third was to enthuse and support teachers to put together their work in print form and support other fellow teachers. Teachers from ten schools participated in the project. This paper describes the development of teacher practitioner learning communities and the integration of knowledge, disseminated by university scholars, into practitioner practice.

Keywords: Professional development, mathematics teachers, university scholars, school-based, Singapore.