

## **DEVELOPING MATHEMATICAL PRACTICES WITHIN COMMUNITIES OF MATHEMATICAL INQUIRY**

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The importance of students being able to participate in productive discourse in mathematics classroom has received increased recognition over the past decades. Both within New Zealand, and internationally educators, researchers, and policy makers all acknowledge the significant role of students collaboratively engaging in a range of mathematical practices (Boaler, 2003b RAND, 2003) including them explaining and justifying mathematical arguments has on their construction of rich and deep understandings. These ambitious calls for change require co-construction of collective understandings within classrooms where teachers are members of the community and there is interdependence between all participants in contributing individual and shared knowledge, strengths, and perspectives (Calor et al., 2019). These advocated changes necessitate radically different roles and responsibilities for all participants, including how they are to relate to each other, to the classroom power and authority base, and to the discipline of mathematics itself (Boaler, 2003a; Hunter, 2008). Key to enacting these challenging changes are the pedagogical actions teachers take to guide and negotiate the social and mathematical norms pivotal to facilitating communities of mathematical inquiry. This lecture will report on the elements of a research and practice based professional learning and development project within schools in New Zealand. Descriptions will be provided of the use of a purposefully designed communication and participation framework and the way in which teachers have used it to map out establishment of inquiry communities. Exemplars of how the teachers scaffolded student engagement in reasoned discourse that supported use of more proficient mathematical practices within inquiry communities will be described.

### **References**

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