Mathematics and Mathematics Education
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Contributions of 'Noticing' in the Teaching and Learning of Mathematical Modelling as Real World Problem Solving

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Date: 2nd March 2015 (Monday)
Time: 10.30 to 11.45 am
Venue: MME Journal Room

Abstract

The discipline of 'noticing' has received attention as an essential ability of a perceptive and effective mathematics teacher. While this interest has been overwhelmingly directed towards its significance in 'within classroom' contexts, with conventional curricular topics, its relevance to the learning and teaching of mathematical modelling deserves specific elaboration. This includes the initial identification of problem rich situations (a frequently neglected element in teaching), and the maximising of educational opportunities that they present, as well as mentor activity in learning settings. We will look at ways that 'noticing' is involved in these three facets of modelling education, and identify characteristics that have the potential to increase effectiveness in designing tasks, and supporting the development of modelling expertise with novice learners. It is directed to the challenge of preparing future citizens with skills to apply mathematics to address problems in everyday life, society, and the workplace.

About the speaker:

Peter's background includes eight years as a secondary mathematics teacher and five years teaching tertiary mathematics in addition to his major involvement with university based mathematics education. He holds research degrees in both mathematics and education, and research areas have encompassed proof, disciplinary mathematics learning, assessment, collaborative learning and metacognition, technology use including attitudinal factors, and his main interest - mathematical modelling as real world problem solving. Published work has been directed towards both research and practice at all levels of secondary mathematics and across the secondary-tertiary interface. Peter is a past president of The Mathematics Education Research Group of Australasia (MERGA) and of ICTMA - the Affiliated Study Group of ICMI concerned with the teaching, learning and researching of applications and modelling in education. He has been a member of the international executive committee of ICMI, was a recipient of the MERGA Career Research Medal in 2011, and is a Fellow of the Institute of Mathematics and Applications (UK).

All are Welcome!

For more information, please contact Dr Jaguthsing Dindyal, at jaguthsing.dindyal@nie.edu.sg