

Ensuring equity through balancing culture with problem solving in a community of inquirers

Roberta Hunter (Massey University, New Zealand)

Abstract: A disproportionately large number of Pasifika students achieve at lower levels than their Asian and European fellow students in the New Zealand schooling system. However, we know that their achievements and failures are not dependent on their own efforts; they are the product of culturally situated forms of social interaction which they meet in mathematics classrooms. In this presentation I will explore the opportunities and/or barriers which affect the learning of this group of students as they engage in problem solving and mathematical practices in differential ways. I will present ways the home cultures and values can be used as learning tools to empower diverse students (represented in this presentation by the Pasifika students). I will draw on classroom episodes to show how the role teachers take in the classroom is central to how their students participate and communicate effectively in high level and challenging problematic activity. As a key equity issue I will illustrate how ensuring that all students learn to explain and justify their mathematical reasoning, inquire into and explore the reasoning of others' and justify or challenge this reasoning, as appropriate during problem solving, is critical for learning deep and rich conceptual understandings of mathematics.