

Mathematical Thinking in a Context of ‘General Thinking’: Implications for Mathematics Education

Corinne Miller

Southern Cross University
<Corinne.miller@scu.edu.au>

Geoff Woolcott

Southern Cross University
<Geoff.woolcott@scu.edu.au>

Christos Markopoulos

Southern Cross University
< christos.markopoulos@scu.edu.au >

This new project explores the similarities and differences of mathematical thinking and ‘general thinking’, as well as related motivational and emotional aspects, focusing on how these differ in educational contexts. It will examine assumptions of the underlying feature of mathematics curriculum design and pedagogy, for example, that linear structure is the most efficient means of building mathematical knowledge or that number-based knowledge is a reliable indicator of mathematical skill. Insights gained will be used to improve the current paradigms in course structure and pedagogy for classroom mathematics in order to develop a structure better aligned to student capabilities and potentials.