

**THE IMPACT AND CHALLENGES OF EARLY MATHEMATICS INTERVENTION IN
AUSTRALIAN CONTEXTS**

Ann Gervasoni

Monash University, Australia

The importance of providing all children with access to high quality mathematics learning opportunities and teaching is well established. However, despite teachers' best efforts, some young children do not thrive mathematically in a typical classroom situation. One response to this situation is to provide these children with short-term mathematics intervention programs taught by specialist teachers.

There are many important questions and issues related to understanding mathematics learning difficulties and effective intervention approaches. Definitions are contested and research evidence is yet to establish clear answers to questions such as: when is the most effective time to begin an intervention? Do children profit more from individualised interventions held outside of the usual mathematics class or from interventions that are part of regular mathematics classes? Also unclear is whether conceptually-based and constructivist-oriented mathematics instruction is also suitable for children with mathematics learning difficulties.

This lecture will explore these issues through considering the impact and challenges associated with an Australian intervention program for six-year-old children: the *Extending Mathematical Understanding* (EMU) program. This intervention aims to advance children's mathematics learning and confidence through conceptually-based and constructivist-oriented mathematics instruction. A focus of the lecture will be examining the longitudinal progress of students who participated in the intervention program across the subsequent three years, and their mathematics profiles both before and after the intervention. These data will provide some evidence for exploring the impact and challenges associated designing and implementing effective approaches for assisting children with mathematics learning difficulties. The critical importance of aligning interventions with classroom mathematics teaching will be considered also.