**Title** | Learning from Lessons: Studying the construction of teacher knowledge catalyzed by purposefully-designed experimental mathematics lessons (Professor Doug Clarke and Anne Roche)

**Overview** | The major premise of this pilot project is that teachers learn from the act of teaching a lesson and the planning of a subsequent lesson. The focus of data generation and analysis is therefore the teaching actions associated with the delivery of a lesson. This includes the teacher’s thinking prior to the lesson, the teacher’s actions during the lesson, the teacher’s subsequent reflective thoughts about the lesson, and the consequences of this for a second lesson. In this view, the lesson functions as a catalyst for teacher knowledge construction. This pilot project is the first stage in a research program designed to answer two key research questions:

(i) When reflecting on a recently taught lesson, which lesson elements or events do teachers consider most salient and how do these influence subsequent lesson planning?

(ii) What forms of teacher knowledge are foregrounded in the process of reflection on a lesson, and how do these contribute to subsequent lesson planning?

The research design combines five key features: (i) Experimental lessons as a catalyst to facilitate teacher learning; (ii) A model of teacher knowledge; (iii) A model of teacher learning; (iv) Recent research into teacher planning; and (v) High-end technology to generate fine-grained classroom data.

**Funding bodies and amount** | Spencer Foundation (USA) ($44,326)

**Research partners** | Professor David Clarke (University of Melbourne)

**Industry partners involved** | Dr Miriam Sherin (Northwestern University, USA)

**Timeline/Duration** | 2014-2015

**Research Problem** | Despite the growing recognition of the centrality of the teacher’s role to student learning, teacher knowledge and teacher learning remain under-theorised. This project will advance understanding of teacher knowledge in action through analysis of teacher lesson planning and of teacher knowledge construction through teacher reflection on the consequences of carrying out those lesson plans. However, a key characteristic of this study that the investigation is deeply grounded in actual classroom practice and in the reflections of teachers on that practice.

**Findings, including emerging findings** | Commencing project