



Seminar

School of Education

The many and varied paths to acquiring and updating conceptual understanding

Sophisticated understanding of complex ideas requires the development of appropriate mental models and accurate beliefs about how knowledge works. Conceptual knowledge is both difficult to acquire and problematic to update compared to declarative or factual information. For example, research suggests one of the greatest hurdles to scientific understanding is that complex scientific concepts and the basis of scientific knowledge are both often misconceived. In this talk I will discuss research suggesting that people follow different cognitive and emotional paths when attempting to acquire and update conceptual knowledge, particularly when learning online. Misconceptions happen for several different reasons; these reasons differ between individuals and between concepts. Online environments also influence the self-regulation of concept learning, not always for the better. Overconfidence and prior knowledge often curtail the conceptual change process. This complex mix of factors necessitate a personalised approach to developing conceptual knowledge that has not traditionally been possible in mass education systems. I will provide some suggestions about how this personalisation might occur.

A/Prof Jason Lodge

Jason Lodge is Associate Professor of Educational Psychology in the School of Education and Institute for Teaching and Learning Innovation at The University of Queensland. Jason's research focusses on the cognitive, metacognitive, social and emotional mechanisms of concept learning and conceptual change. He also conducts research on the translation of the science of learning into practice in educational settings, particularly in digital learning environments and higher education. Jason co-hosts and co-produces the *Beyond the Lectern* podcast and is lead editor on the forthcoming volume *Learning Analytics in the Classroom* (Routledge, 2019).

Seminar detail

Date: 3 August 2018

Time: 1:15pm – 2:30pm

Room: TBA (after Sem 2 timetabling completed)