Student Responses to a Cognitive Activation Pedagogical Approach

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Cognitive activation (Klieme et al., 2009; Lipowsky et al., 2009) is a burgeoning construct that has gained international recognition since its inclusion in the 2012 Programme for International Students Assessment (PISA) questionnaire. Despite the growing momentum, there is still uncertainty about what practices are entailed within a cognitive activation approach. This uncertainty is considered a reason for the minimal uptake of cognitive activation pedagogies within mathematics classrooms (Le Donne et al., 2016). The aims of our study are to unpack the various component practices encompassing a cognitive activation instructional approach and to examine how students with varying engagement and achievement levels respond to it.

In this presentation, we will expound upon seminal definitions of cognitive activation, examine some of the finer-grained practices incorporated within the construct and introduce aspects of an on-going study. The study will utilise a case study methodology to examine student responses to cognitive activation instruction in a Year 6 mathematics classroom. Quantitative data obtained from the Motivation and Engagement Scale (Martin, 2006) and a researcher-constructed content knowledge test will be used to categorise students based on their engagement and achievement levels. All students will then participate in a series of six intervention lessons designed using a cognitive activation approach. Lessons will be video recorded to help analyse students' responses to the various cognitive activation practices. Semi-structured interviews with ten case study students with various engagement and achievement levels will be conducted. Data will be interpreted using inductive approaches to detect similarities and differences between students who share analogous engagement and achievement characteristics.

References

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